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DxMONITOR

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Animal Health Report

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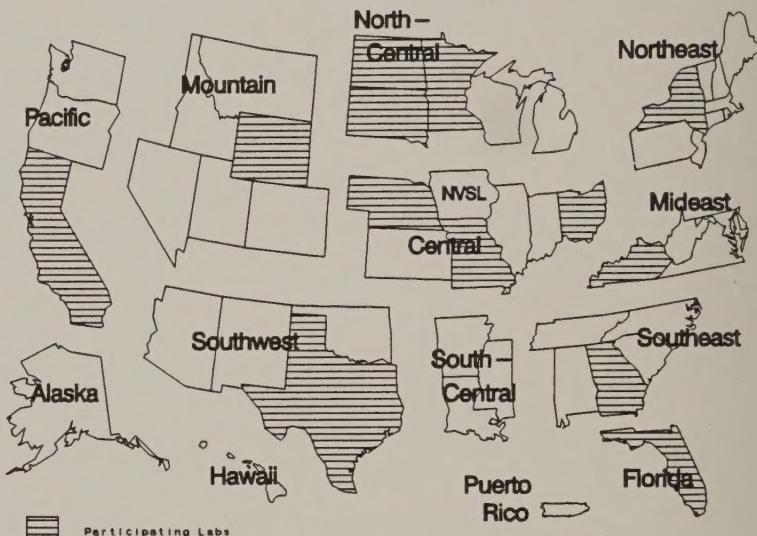
Spring 1992

The DxMONITOR is a quarterly report of the Veterinary Diagnostic Laboratory Reporting System (VDLRS) which is a cooperative effort of the American Association of Veterinary Laboratory Diagnosticians (AAVLD), the United States Animal Health Association (USAHA), and the United States Department of Agriculture, Animal and Plant Health Inspection Service (USDA:APHIS). The purpose of the DxMONITOR is to report trends of confirmed disease diagnoses and animal health data collected from veterinary diagnostic laboratories and USDA:APHIS.

Data in this issue originated from the National Veterinary Services Laboratories (NVSL) and APHIS:Veterinary Services, as well as diagnostic laboratories located in the States shaded on the map below.

Abbreviations for regions used in this issue are:

AK = Alaska
CL = Central
FL = Florida
HI = Hawaii
ME = Mideast
MN = Mountain
NC = North-Central
NE = Northeast
PA = Pacific
PR = Puerto Rico & U.S. Virgin Islands
SC = South-Central
SE = Southeast
SW = Southwest
UNK = Unknown



The disease reporting period for new data is October 1, 1991 through December 31, 1991. Caution should be taken when extrapolating this information due to the limited sample size and inherent biases of submitted specimens.

Current Data Now Displayed in Appendix

Beginning this issue, all data from the current reporting period will be displayed in tabular format in an appendix (page 29). This change is part of an effort to display more information in the form of graphs, maps, or charts (rather than tables) in the main sections of the report. Comments on this change in format are welcome.

Acknowledgment of Contributors

The following laboratories have contributed data which are reported in this issue. Thanks to all of the individuals at these laboratories who have worked to make the DxMONITOR possible.

- California Veterinary Diagnostic Laboratory (Davis, CA)
- Florida Bureau of Diagnostic Laboratories (Kissimmee, FL)
- Athens Veterinary Diagnostic Laboratory, University of Georgia (Athens, GA)
- Tifton Veterinary Diagnostic and Investigational Laboratory, University of Georgia (Tifton, GA)
- National Veterinary Services Laboratories (Ames, IA)
- Breathitt Veterinary Center, Murray State University (Hopkinsville, KY)
- Livestock Disease Diagnostic Center, University of Kentucky (Lexington, KY)

- Minnesota Veterinary Diagnostic Laboratory (St. Paul, MN)
- Veterinary Medical Diagnostic Laboratory, University of Missouri-Columbia (Columbia, MO)
- Veterinary Diagnostic Center, University of Nebraska-Lincoln (Lincoln, NE)
- New York State Veterinary Diagnostic Laboratory, Cornell University (Ithaca, NY)
- North Dakota Veterinary Diagnostic Laboratory (Fargo, ND)
- Reynoldsburg Laboratory, Ohio Department of Agriculture (Reynoldsburg, OH)
- Animal Research and Diagnostic Laboratory, South Dakota State University (Brookings, SD)
- Texas Veterinary Medical Diagnostic Laboratory (College Station, TX)
- Wyoming State Veterinary Laboratory (Laramie, WY)

Lab Notes

This section presents short descriptions of current investigations, outbreaks, or events of potential interest to diagnostic laboratories. The purpose is to provide a forum for timely exchanges of information about veterinary diagnostic laboratory activities. Submissions from nonparticipating laboratories are welcome.

Eastern Equine Encephalomyelitis in Louisiana Emus

In August 1991, the National Veterinary Services Laboratories (NVSL) were asked to assist the Louisiana Veterinary Diagnostic Laboratory (LVDL) in determining the cause of high mortality in a group of mature breeding emus in southern Louisiana. The disease was first noted the end of July when about 24 birds died. This represented an attack rate of 65 percent and a case fatality rate of 80 percent. Immature emus from this flock had previously experienced mortality related to cerebral filarial parasitic infestation. The current illness, however, was different. The affected emus were 20 to 36 months old and showed depression, hemorrhagic enteritis, and emesis.

Although the acuteness of the disease suggested that the birds died of a toxicity, the mortality pattern among pens and the absence of an obvious source of toxin did not support this etiology. Lesions described by pathologists from the LVDL included severe hemorrhagic enteritis with extensive random, pseudomembranous mucosal inflammation; hepatic and splenic subcapsular hemorrhage and necrosis; and subserosal hemorrhage of the heart. Because of the histopathologic changes in the liver, pathologist from the LVDL suspected a viral infection and isolated a togavirus which they were unable to identify.

The NVSL examined tissues from two emus. Histopathologic changes were in concurrence with those described for other birds examined at the LVDL, and occasional hepatocytes contained intranuclear inclusion bodies. Eastern equine encephalomyelitis (EEE) virus was isolated from pooled tissues from one of the birds tested and the virus submitted was also identified as EEE. Virus particles compatible with this agent were observed in a degenerating hepatocyte on electron microscopy. There was no evidence of parasitic disease or toxicosis.

Antibody against EEE was detected in two of the emus that had shown clinical disease and had

subsequently recovered. Based on clinical and laboratory findings, the final diagnosis of the condition was EEE.

Contacts: Dr. Thomas N. Tully, Jr., Veterinary Clinical Science, School of Veterinary Medicine, Louisiana State University, (504) 346-3145, or Dr. Brundaban Panigrahy, NVSL, (505) 239-8551.

Eastern Equine Encephalomyelitis in Georgia Emus

Eastern equine encephalomyelitis (EEE) virus was isolated from an emu which died of hemorrhagic colitis on March 8, 1992. This was the earliest diagnosis of EEE recorded by the Veterinary Diagnostic Laboratories in Georgia in the last 10 years.

The emu was from a flock of nine birds located in southeast Georgia. The clinical signs observed were much like those reported from the 1991 outbreak of EEE in emus in Louisiana, and included hemorrhagic diarrhea and rapid death. Two additional emus from the flock died 2 days later with similar lesions after showing the same clinical signs.

In retrospect, it appears likely that EEE was responsible for the death of an emu in south Georgia in 1991. Although virological studies were not done at the time, the signs and lesions observed in that bird were consistent with those now associated with EEE in emus.

Contact: A. Wayne Roberts, Veterinary Assistance Laboratory, Athens, (706) 542-5906.

Polymerase Chain Reaction Effective in Confirming Malignant Catarrhal Fever in White-Tailed Deer

Malignant catarrhal fever (MCF) was confirmed in a white-tailed deer from Alabama through testing of serum and EDTA-preserved blood submitted to the Diagnostic Virology Laboratory (DVL), NVSL, Ames, Iowa. The samples were submitted by the

Southeastern Cooperative Wildlife Disease Study (SCWDS), Athens, Georgia, but the investigation also involved personnel from the Alabama Department of Conservation and Natural Resources, Auburn University, and APHIS Veterinary Services.

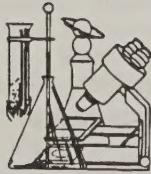
According to the case history, the affected animal was among a group of captive white-tailed deer purchased by a private citizen at an auction in Missouri. Seven of the eight animals from Missouri had died. Lesions present in the animal tested by the NVSL included massive hemorrhagic enteritis, white foci on the liver and kidney, generalized lymphadenopathy, and mucopurulent rhinitis, tracheitis, and endometritis. On microscopic examination, multifocal accumulations of lymphoid cells were noted in liver and kidney. Another deer that died earlier was examined at Auburn University and found to have lesions strongly suggestive of MCF.

Serum tested by the indirect fluorescent antibody screening test was positive at a 1:20 dilution. Leukocytes separated from the EDTA-preserved blood were tested by a polymerase chain reaction (PCR) procedure developed in the DVL. Using this technique, segments of MCF-specific DNA were amplified and then identified by comparison with a positive control wildebeest strain of MCF virus.

In the past, a diagnosis of MCF has depended almost exclusively on the nature of gross and microscopic lesions. Now, the availability of the PCR for MCF will enable the diagnostic laboratory to make a more definitive diagnosis by a means other than virus isolation, a technique that has not proved to be a very reliable diagnostic tool. If diagnostic laboratories are interested in having the PCR performed to assist in the diagnosis of MCF, arrangements should be made in advance with the DVL.

Contact: Dr. Merwin Frey, NVSL, (515) 239-8551.

Interpreting Serologic Test Results for Encephalomyocarditis of Swine



NVSL tested swine sera collected by the National Animal Health Monitoring System's National Swine Survey (1989-1991) for antibodies to the encephalomyocarditis (EMC) virus. As a result of

that testing, NVSL personnel have concluded that little importance should be attached to VN antibody

titors of 1:8 or 1:16, and only VN titers of 1:32 or greater should be regarded as positive.

The basis for drawing those conclusions was the observation that, when 402 sera of known VN titers were tested by indirect immunofluorescence assay (IFA) at a 1:10 dilution, 94 of the 96 sera that had tested VN-positive at 1:64 or less were negative by IFA. One of those IFA-positive samples was VN-positive at 1:8 and the other at 1:16. None of the samples positive at VN titers of 1:32 or 1:64 was IFA-positive. The two IFA-positive samples were not further tested for specificity.

Further evidence for attaching little importance to low VN titers was the finding that a large percentage of the sera from swine in the Midwestern U.S. had VN titers of 1:8 or 1:16, even though clinical signs of EMC were absent and EMC virus was not isolated.

Such observations have led the NVSL to test field samples at an initial screening dilution of 1:32. Samples negative at that dilution are reported as negative. Samples positive at 1:32 (or greater) are reported as positive for EMC.

Contact: Dr. Merwin Frey, NVSL, (515) 239-8551.

EEE Found in Florida Throughout 1991

Although 75 percent of all cases of EEE in Florida are diagnosed in the months of June, July, or August, cases have been seen in every month of the year. Last year was no exception. Despite cooler weather, four cases were diagnosed in the last 3 months of 1991. The final case of the year was not diagnosed until December 24. All four cases occurred in the northeastern part of the State. A total of 156 cases of EEE were diagnosed during 1991.

Contact: Dr. Harvey Rubin, Kissimmee Animal Laboratory, (407) 846-5200.



I. Patterns of Selected Diseases

Section I contains information on diseases of interest as defined by the Office International des Epizooties' (OIE) list B. The purpose of reporting these data is to monitor confirmed cases of specific diseases on a State-by-State or regional basis so that National distributions can be mapped and evaluated.

Bovine Brucellosis	4
Bovine Leukosis	5
Bovine Tuberculosis	6
Paratuberculosis	7
Pseudorabies (PRV)	8
Swine Brucellosis	9
Equine Viral Arteritis (EVA)	10
Equine Infectious Anemia (EIA)	11

Key to Figures in this Section:

- In some cases, the reported number of negative tests performed is a minimum because some laboratories were not able to determine the total number of negative tests performed.
- Data are presented by region or State of sample origin and quarter year of sample submission.

I. Patterns of Selected Diseases (continued)

Bovine Brucellosis

Source: Dr. Mike Gilsdorf
USDA:APHIS:VS
Cattle Diseases Staff
(301) 436-4918

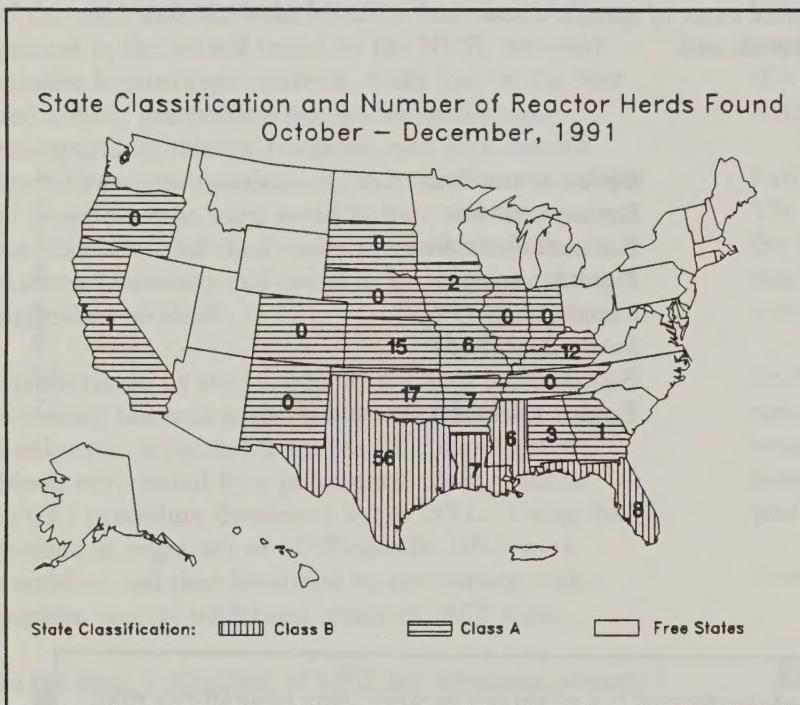


Figure 1

Reactor herd = newly identified herd with at least one case of brucellosis confirmed by serology or culture.

Definition of State Classifications:

Class B: More than 0.25%, but less than 1.5% of all herds infected.

Class A: No more than 0.25% of all herds infected.

Free: No infected herds under quarantine during the past 12 months.

There were 141 reactor herds found from October through December, 1991. This was 38 more herds than were found during the previous 3 months, but 37 fewer than from October through December, 1990.

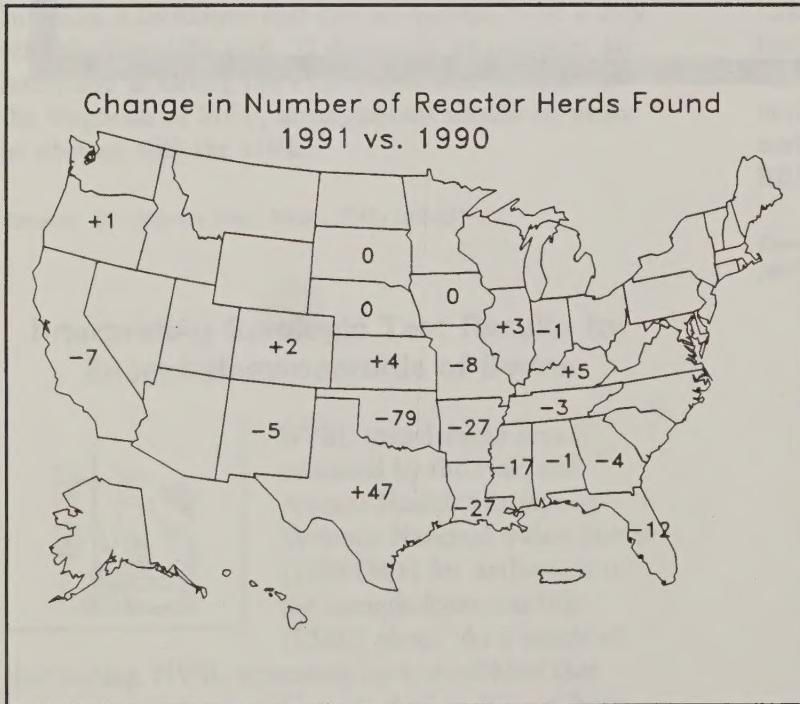


Figure 2

The total of 693 reactor herds found in the U.S. in 1991, was 129 fewer than the total found in 1990. This decrease for the U.S. as a whole was realized despite the finding of 302 reactor herds in Texas in 1991, 47 more than in 1990.

Bovine Leukosis (Criteria: AGID or pathology)

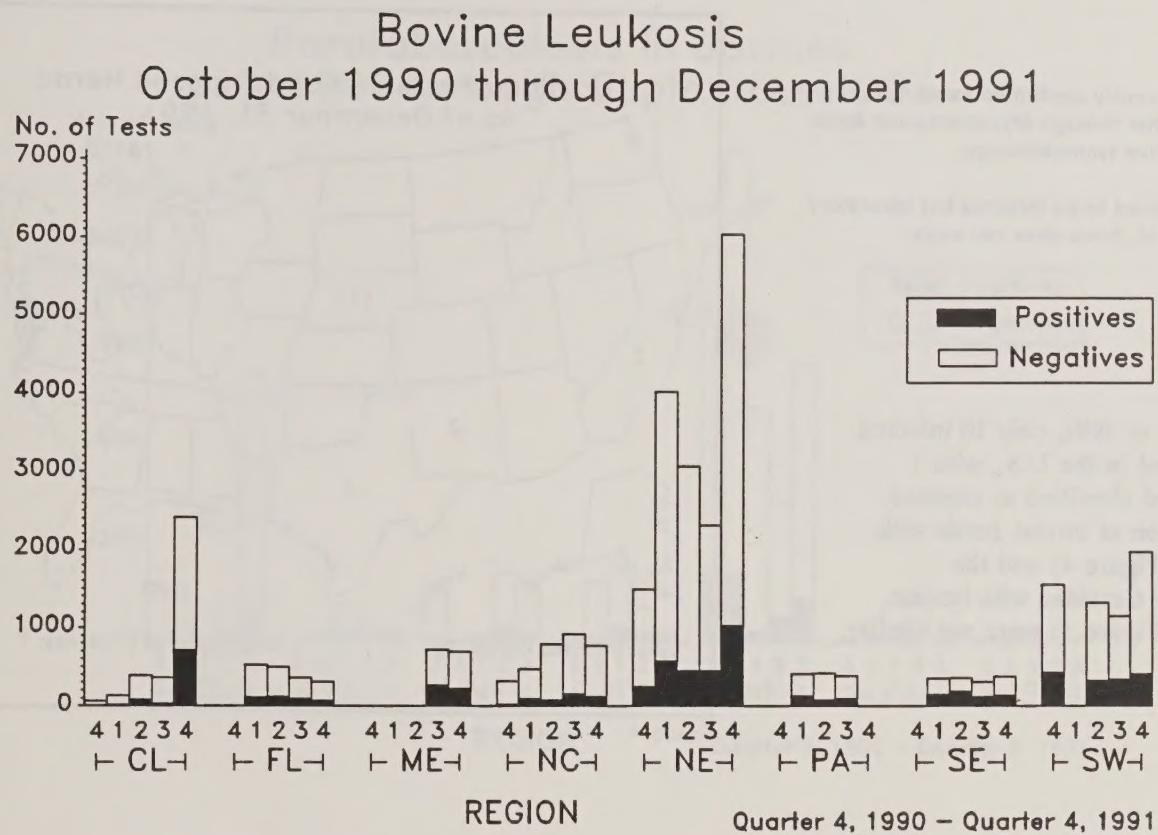


Figure 3

The Northeast region had more positive tests and more total tests reported for bovine leukemia in the third (July-September) and fourth (October-December) quarters of 1991 than did any other region. The percentage of tests positive for bovine leukemia in the Northeast region has remained between 14.3 and 20.0 percent from the fourth quarter of 1990 through the fourth quarter of 1991.

I. Patterns of Selected Diseases (continued)

Bovine Tuberculosis

Source: Dr. Mitch Essey
USDA:APHIS:VS
Cattle Diseases Staff
(301) 436-8715

Infected = Laboratory confirmed existence of bovine tuberculosis, either through *Mycobacterium bovis* isolation or positive histopathology.

Exposed = Believed to be infected but laboratory confirmation of *M. bovis* does not exist.

As of the end of 1991, only 10 infected herds remained in the U.S., with 1 additional herd classified as exposed. The distribution of bovine herds with tuberculosis (Figure 4) and the distribution of Cervidae with bovine tuberculosis (Figure 5) were not similar.

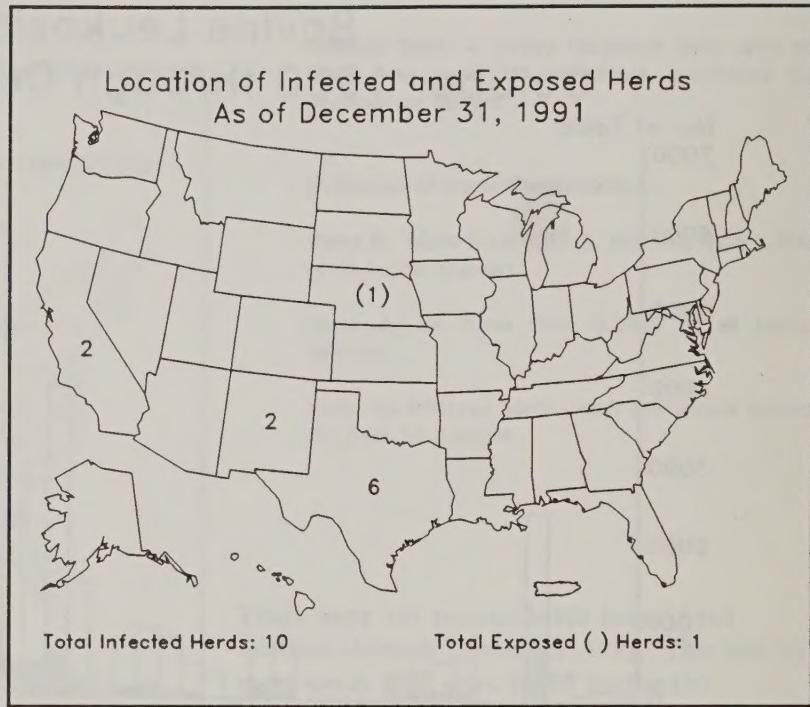


Figure 4

Pending = Herd evaluation still in progress.

Of the 11 herds of Cervidae infected with bovine tuberculosis, 6 were made up of deer. Two of the deer herds were located in New York and 1 each in Wisconsin, Texas, Montana, and Idaho.

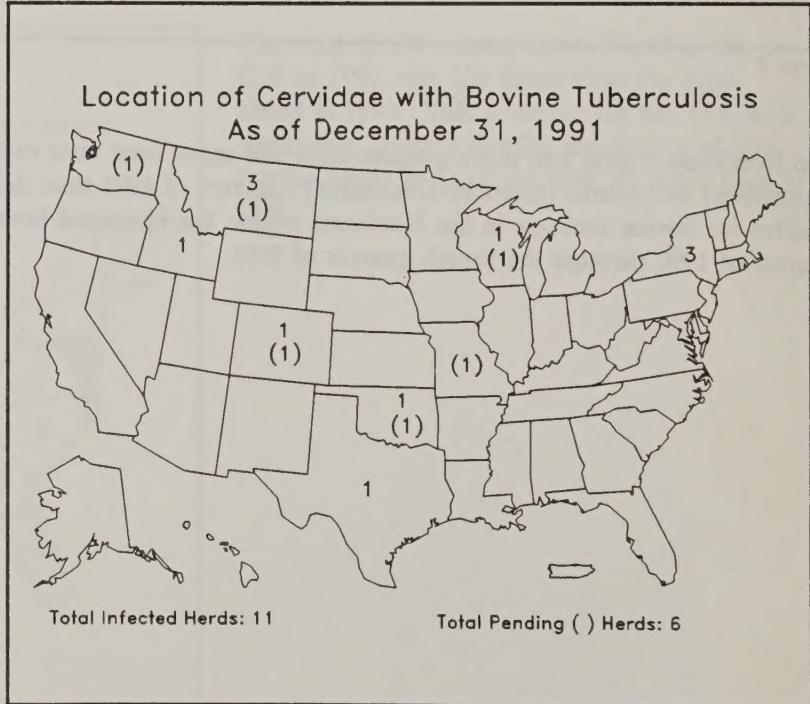


Figure 5

Paratuberculosis (Criteria: Culture or histopathology)

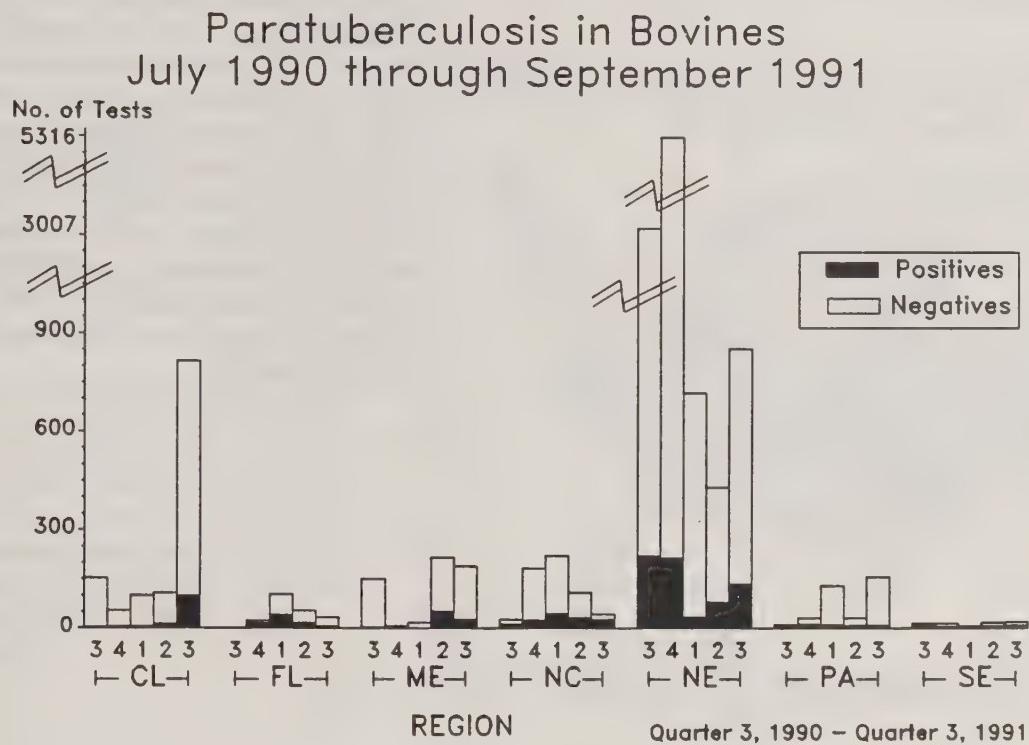


Figure 6

The Northeast region had the most positive tests and the most total tests reported for paratuberculosis in bovines for the third quarter (July through September) of 1991. The percentage of tests positive in bovines in the Northeast during the third quarter of 1991 was over twice as high as during the same period in 1990 (15.8% vs. 7.4%), although the total number of positive tests was actually lower during the period in 1991.

I. Patterns of Selected Diseases (continued)

Pseudorabies (PRV)

Source: Dr. Joe Annelli
USDA:APHIS:VS
Swine Health Staff
(301) 436-7767

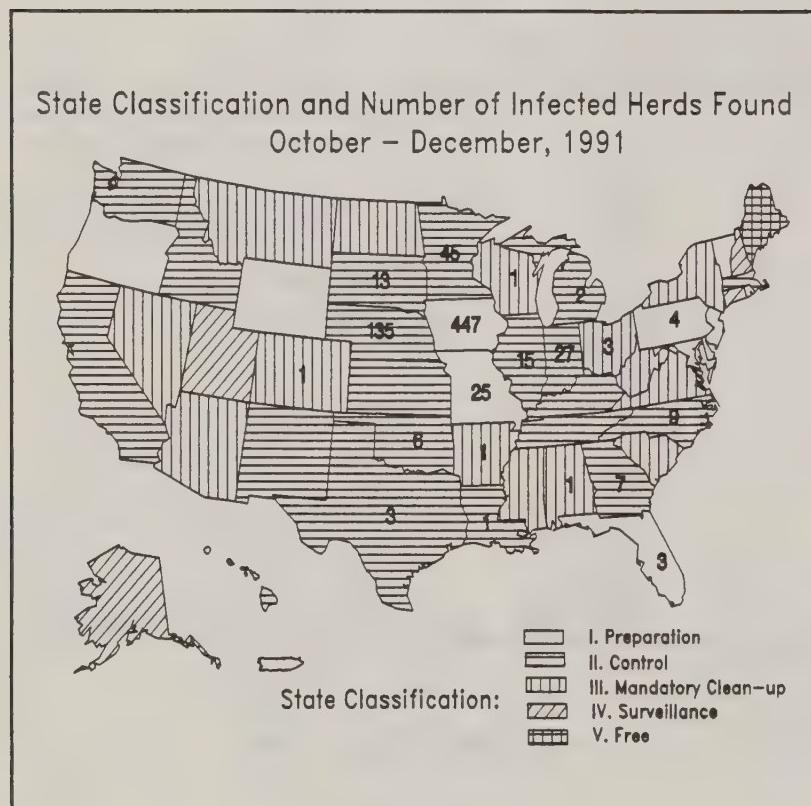


Figure 7

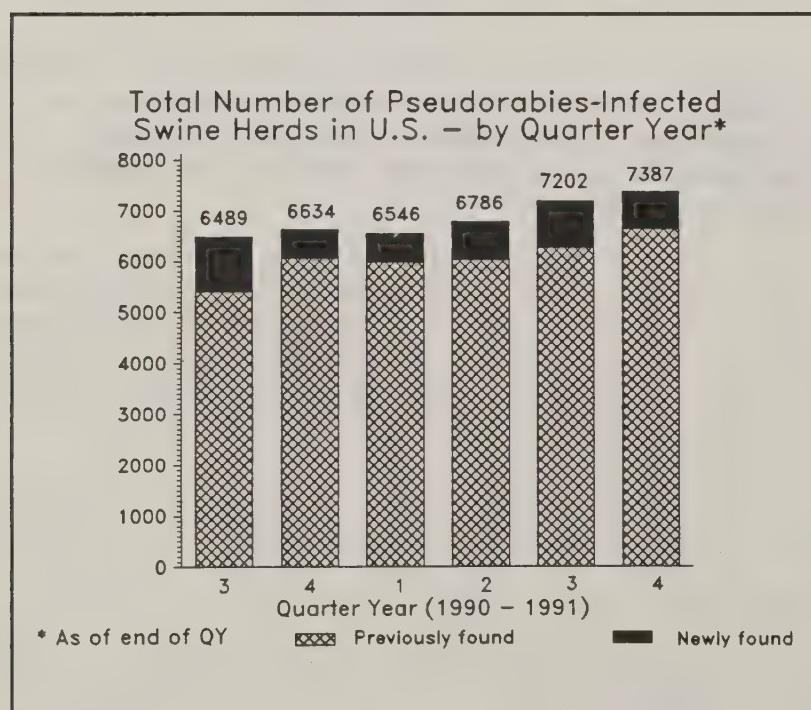


Figure 8

Maine has become the first State in the U.S. to be classified as free of pseudorabies. A total of 749 herds were found infected in the remainder of the U.S. from October through December, 1991. This total was 20 percent lower than the number found during the previous 3 months (931), but 31 percent higher than from October through December, 1990 (571). When considering these data it should be noted that, in many States, the number of herds found infected is a function of the amount and type of testing performed.

The total number of pseudorabies-infected swine herds in the U.S. increased slightly from September to December, 1991. The increase was greatest in Iowa, which had 266 more infected herds at the end of December 1991 than at the end of September of the same year.

Swine Brucellosis

Source: Dr. Delorias Lenard
 USDA:APHIS:VS
 Swine Health Staff
 (301) 436-7767

State Classification

Stage I. Organization (surveillance and tracebacks begun)

Stage II. $\geq 10\%$ Surveillance/year;
 $\geq 80\%$ of tracebacks successful

Stage III. Validated Free
 $(\geq 5\% \text{ Surveillance/year};$
 $\geq 80\% \text{ of tracebacks successful})$

The 24 swine herds found with brucellosis from October through December, 1991, was 1 less than found in the previous 3 months, and the same number found from October through December, 1990. The sources of infection for the 24 newly found infected herds included purchased swine (15), community spread (6), exposure to feral swine (1), and other/unknown (2).

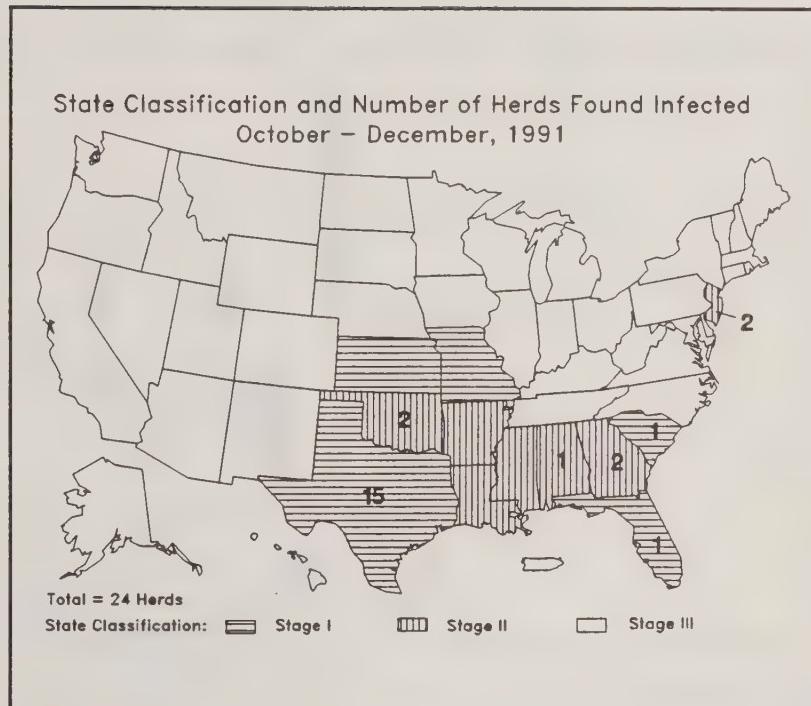


Figure 9

The total number of herds quarantined for swine brucellosis remained at 67 from the end of September to the end of December, 1991. Of the more than 379,000 swine tested for brucellosis from October through December, 1991, 232 (0.06%) were classified as reactors.

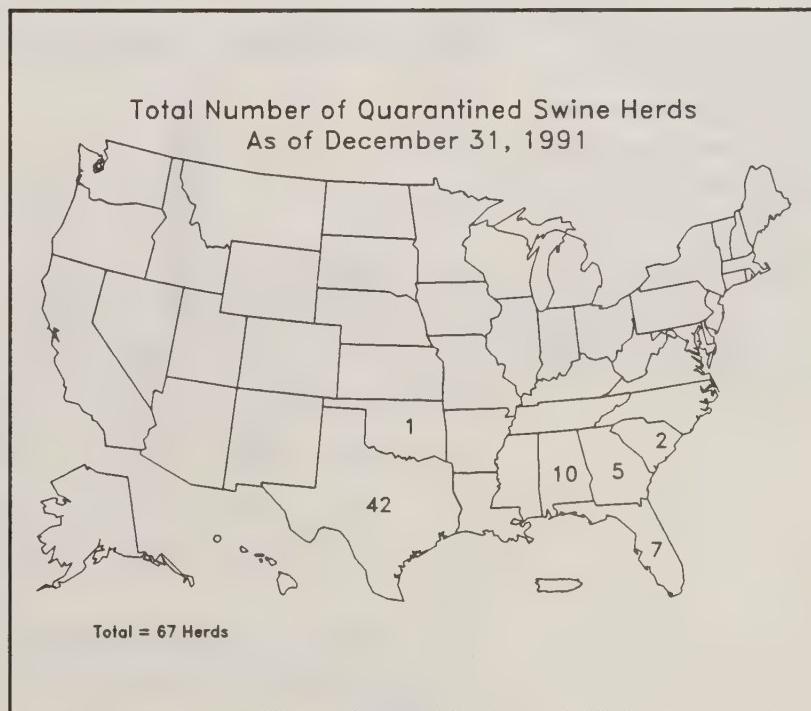


Figure 10

I. Patterns of Selected Diseases (continued)

Equine Viral Arteritis (EVA)

(Criteria: Virus neutralization [$>1:4$ titer] and no history of vaccination, or, virus isolation [tissue or semen])

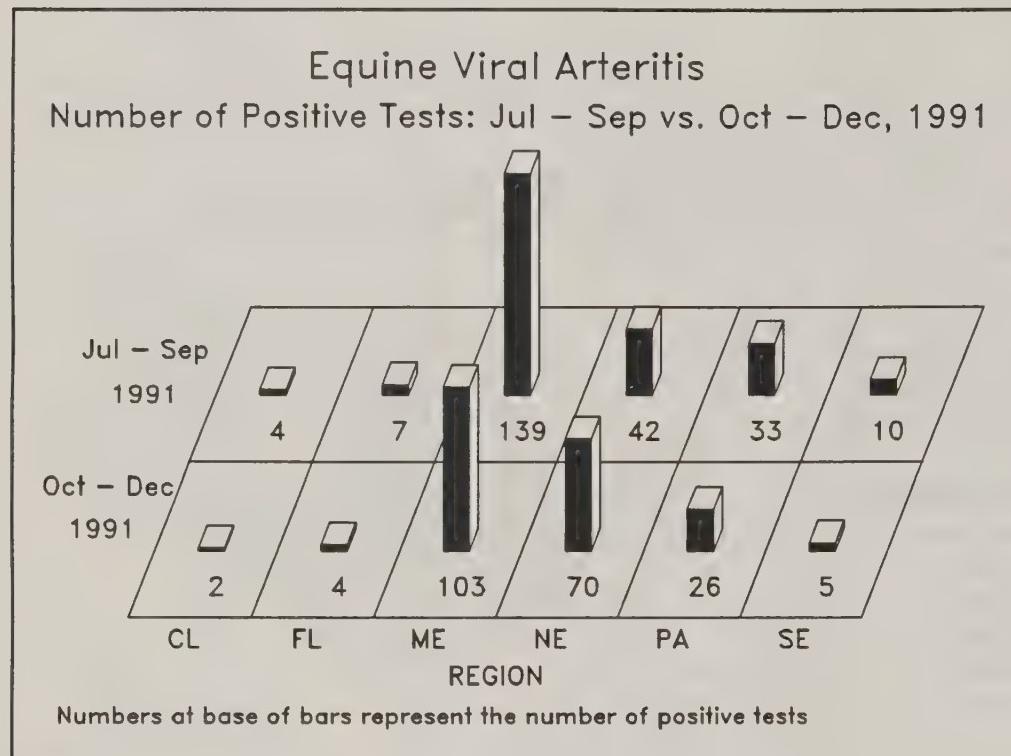


Figure 11

The Mideast region had the largest number of positive tests reported for equine viral arteritis from October through December, 1991, although the total was 26 percent lower than for the previous quarter (103 vs. 139). The Mideast also had the largest number of tests performed (2,237). The Northeast region reported the highest percentage of tests positive (14.8).

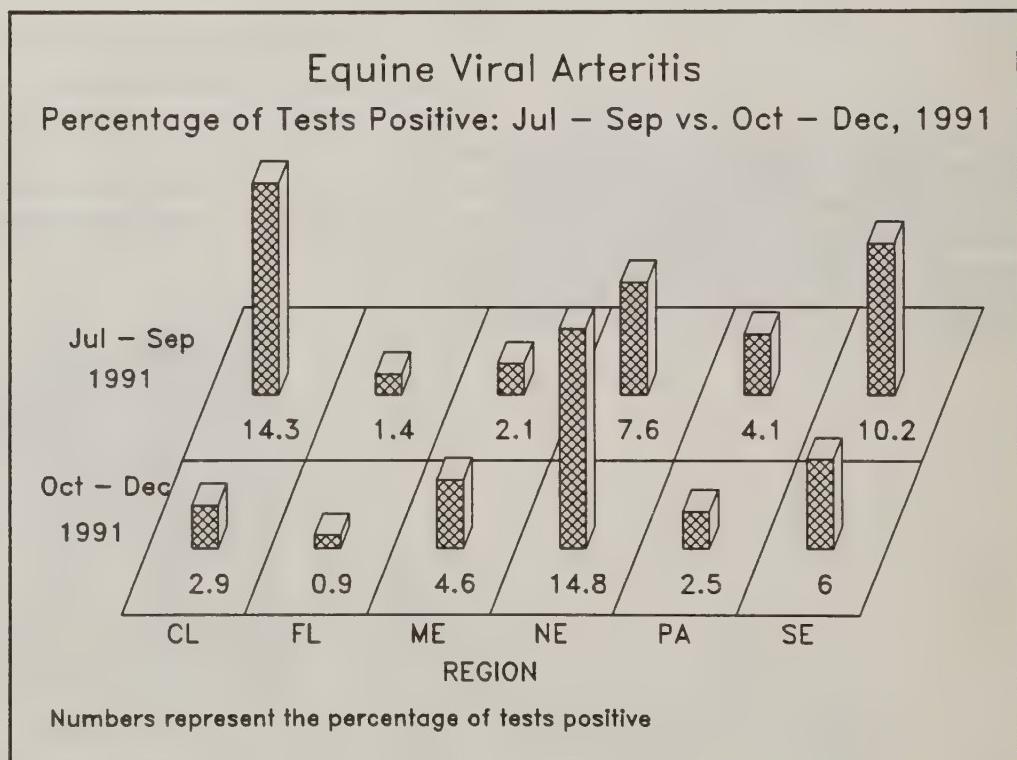


Figure 12

Equine Infectious Anemia (EIA)

Source: Dr. Tommy Thomas
 USDA:APHIS:VS
 Equine Diseases Staff
 (301) 436-6954

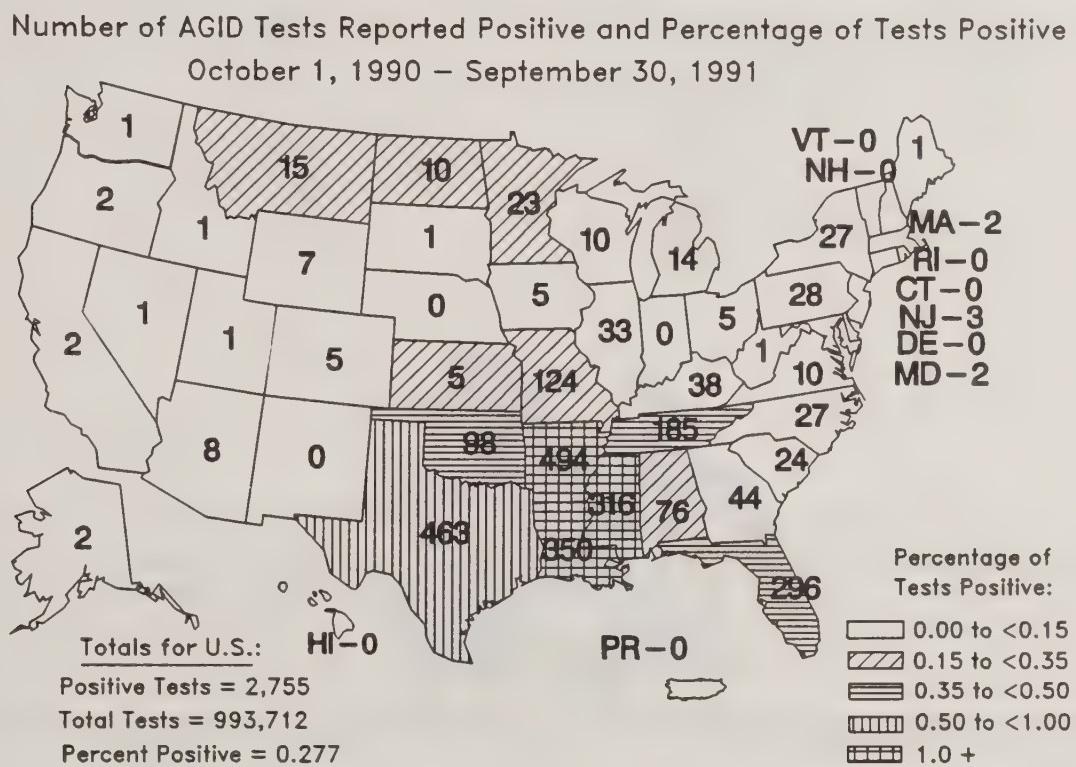


Figure 13

Caution should be used in interpreting both the number of agar gel immunodiffusion (AGID) tests which were positive and the percentage of total tests positive. Testing for equine infectious anemia (EIA) is performed primarily to comply with regulations on the movement of horses and these regulations may vary from one State to another. Thus, the number of positive tests reported from a given State may not be a good indicator of the prevalence of EIA in that State.

I. Patterns of Selected Diseases (continued)



II. Etiologic Agents Associated with Calf Diarrhea

Section II characterizes agents most commonly associated with diarrhea in calves (eight weeks of age or less) from accessions reported to veterinary diagnostic laboratories.

<i>Campylobacter</i> spp.	14
<i>Clostridium perfringens</i> Type C	14
<i>Escherichia coli</i>	15
<i>Salmonella</i> spp.	16
Coccidia Parasitism	17
Cryptosporidia Parasitism	18
Bovine Viral Diarrhea (BVD)	19
Coronavirus	20
Rotavirus	21

Key to Figures in this Section:

- In some cases, the reported number of negative tests performed is a minimum because some laboratories were not able to determine the total number of negative tests performed.
- Data are presented by region of sample origin and quarter year of sample submission.

II. Etiologic Agents Associated with Calf Diarrhea (continued)

Campylobacter spp. (Criteria: Culture)

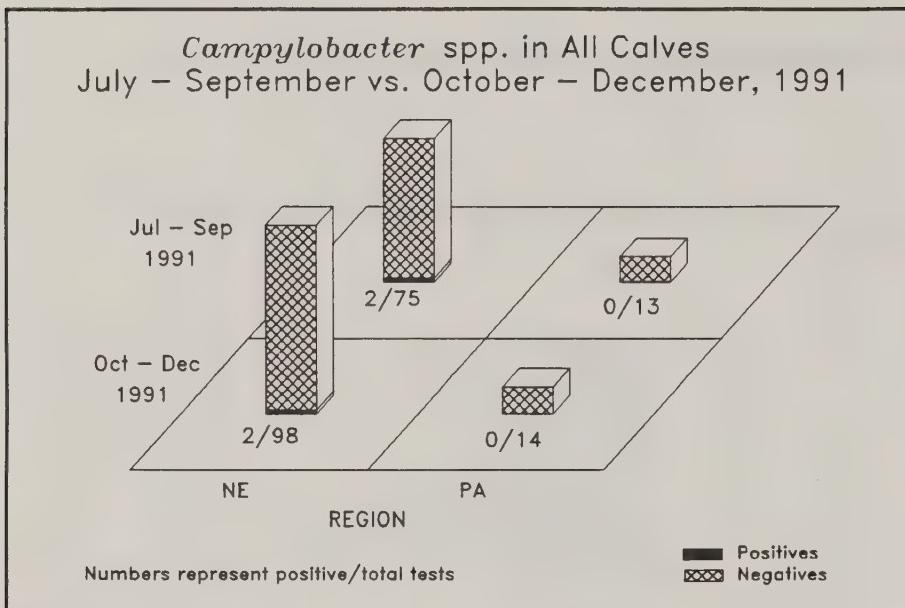


Figure 14

Results of testing reported for *Campylobacter* spp. in calves were similar to last quarter. Only 122 total tests were reported for October through December, 1991. Most of those were from the Northeast region which had the only 2 positive tests reported (10 negative tests reported from the Mountain region are not shown in Figure 14).

Clostridium perfringens Type C (Criteria: Gross and histopathologic exam)

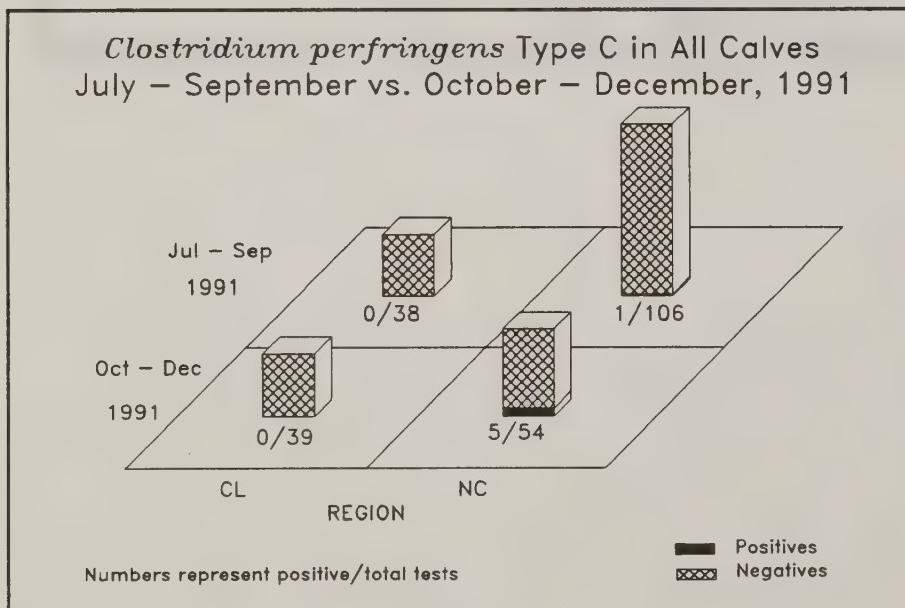


Figure 15

Results of testing reported for *Clostridium perfringens* type C in calves were similar to last quarter. Only 95 total tests were reported for October through December, 1991. Most of those tests were from the North-Central region which had the only 5 positive tests reported (2 negative tests from the Mountain region are not shown in Figure 15).

II. Etiologic Agents Associated with Calf Diarrhea (continued)

Escherichia coli

(Criteria: Culture from intestine and demonstration of at least one virulence characteristic such as: adhesive antigens [K99], bacterial adherence, or enterotoxin)

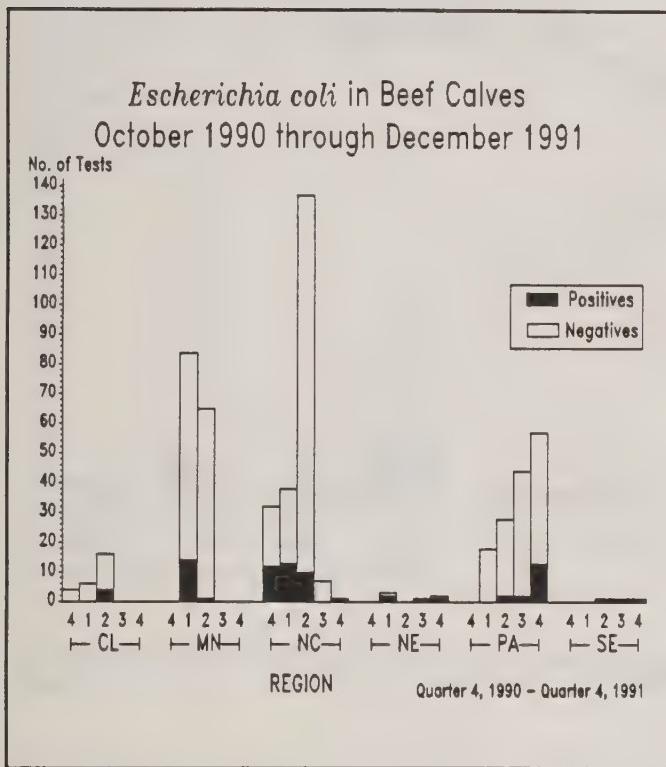


Figure 16

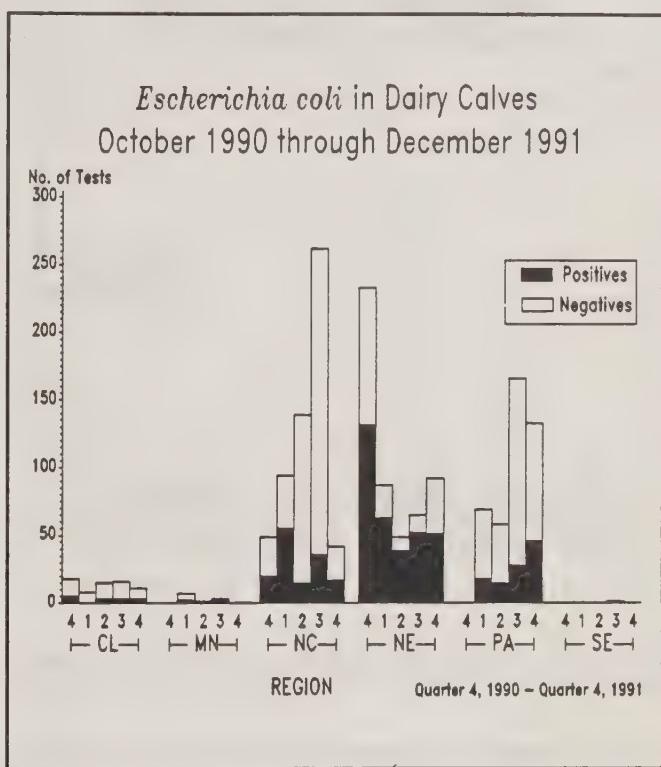


Figure 17

Positive tests for *E. coli* were reported primarily from three regions, the North-Central, Northeast, and Pacific. Most of the positive tests were reported from dairy calves, with the Northeast region having had the highest percentage of tests positive and the highest number of positive tests among such calves over the past five quarters. Only the Pacific region had more dairy calves reported positive for *E. coli* in the fourth quarter of 1991 than in the fourth quarter of 1990.

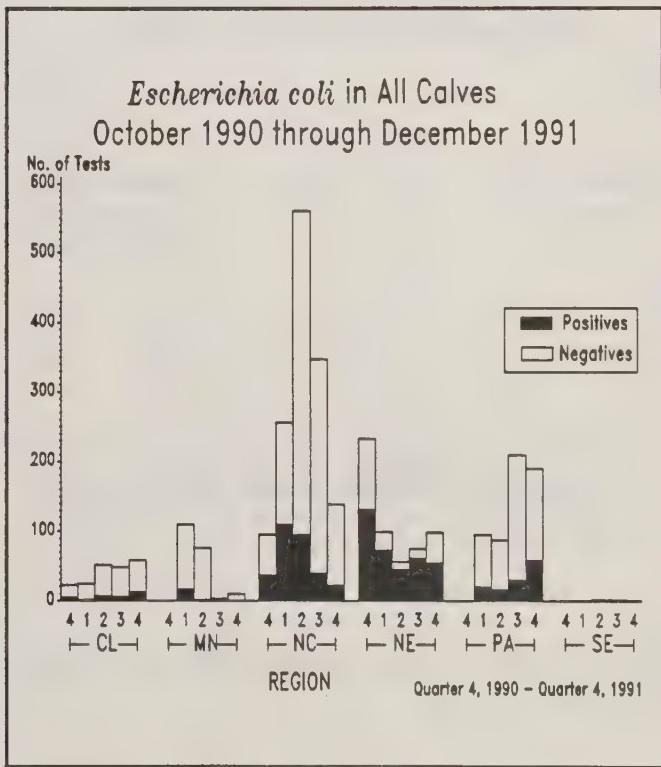


Figure 18

II. Etiologic Agents Associated with Calf Diarrhea (continued)

Salmonella spp. (Criteria: Culture [serotype identification encouraged])

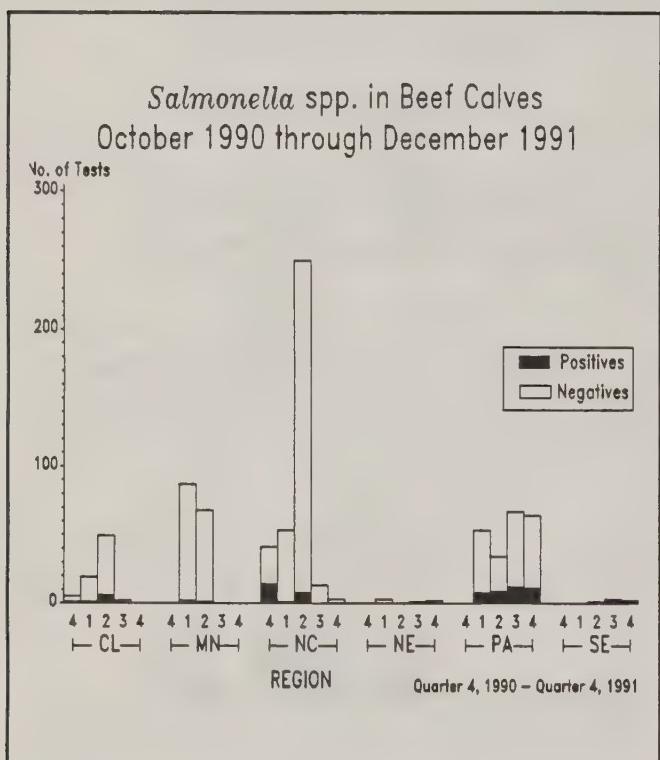


Figure 19

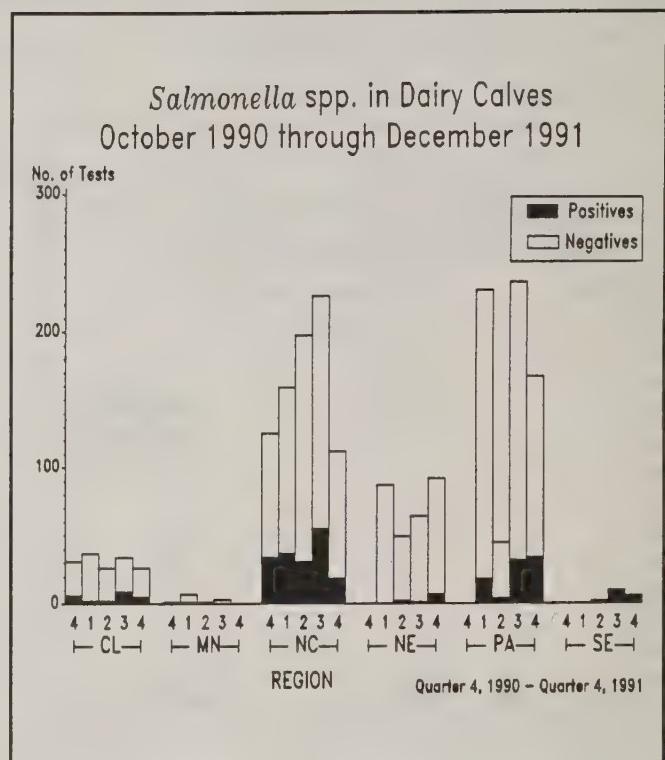


Figure 20

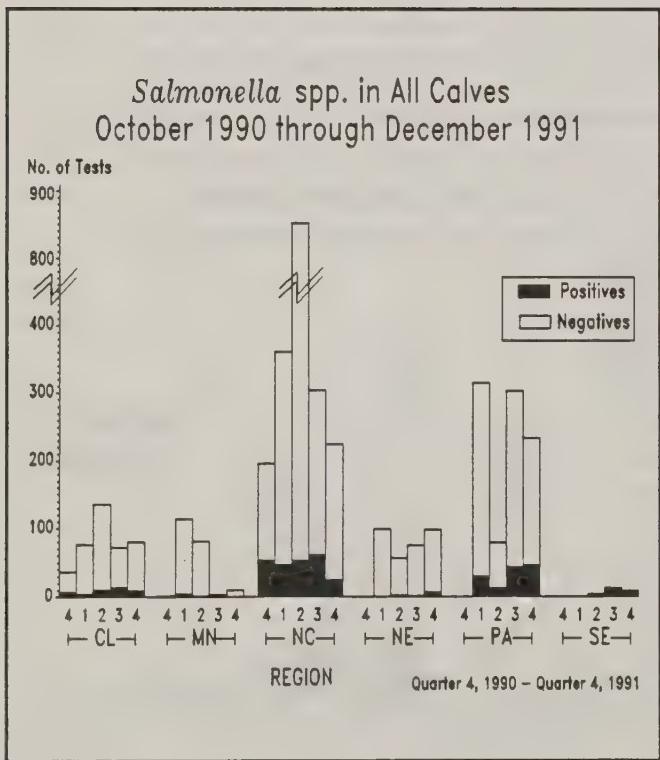


Figure 21

The largest numbers of positive tests for *Salmonella* were reported for dairy calves in the North-Central and Pacific regions. Of all regions which were able to determine the total number of tests performed, the Pacific region had the most positive tests (46) and the highest percentage of tests positive (19.7) for all calves combined in the fourth quarter of 1991.

II. Etiologic Agents Associated with Calf Diarrhea (continued)

Coccidia Parasitism (Criteria: Parasitologic or histopathologic exam)

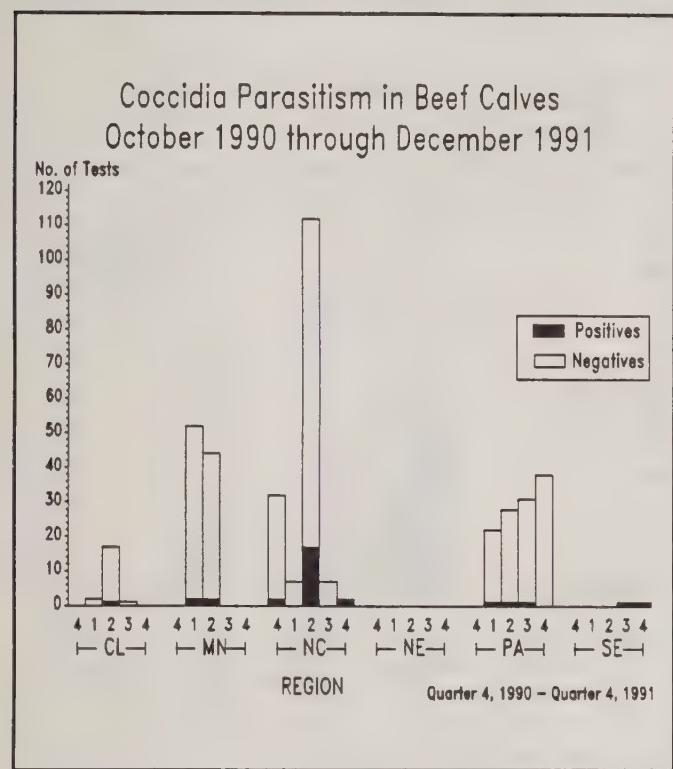


Figure 22

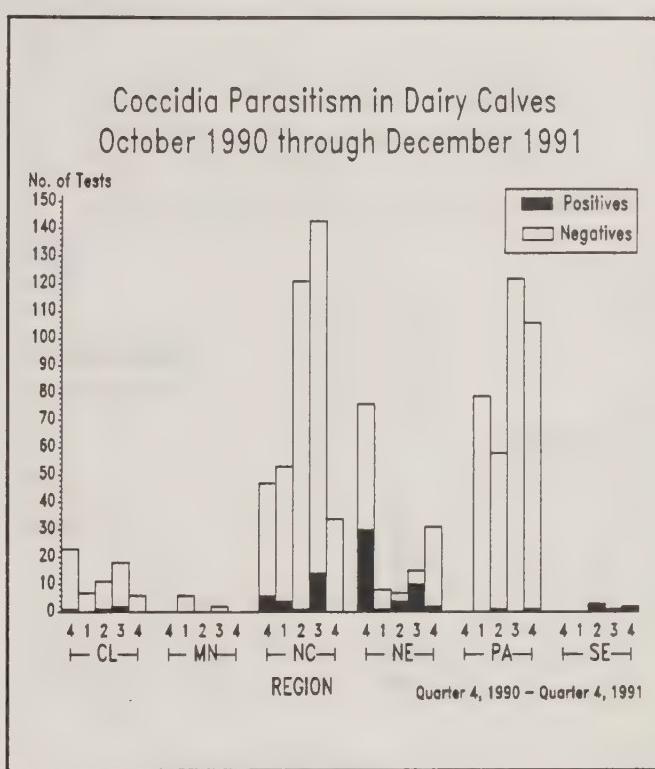


Figure 23

Very few positive tests for coccidia were reported for the fourth quarter of 1991. The only regions with more than three positive tests for all calves combined were the Central and North-Central (6 and 5 positives, respectively). The Pacific region had at least 495 tests performed for coccidia in calves in 1991, but only 5 positives were reported.

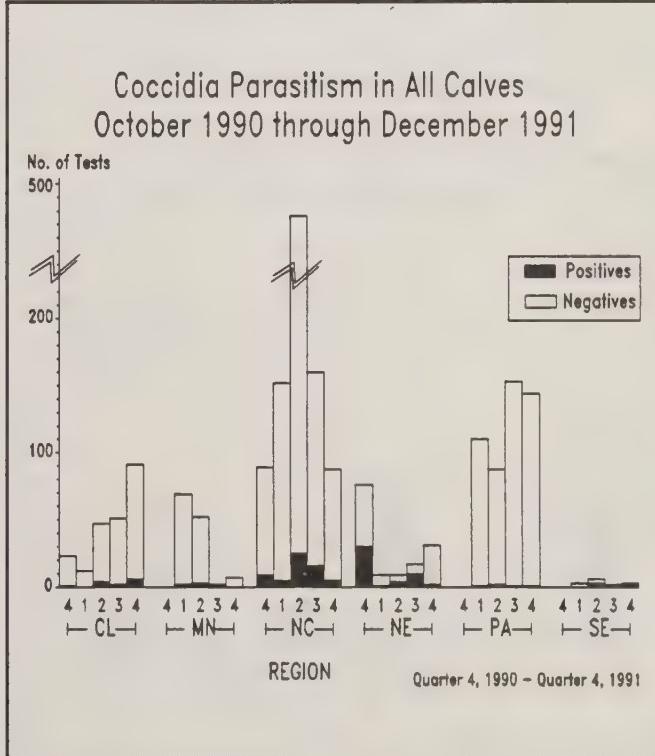


Figure 24

II. Etiologic Agents Associated with Calf Diarrhea (continued)

Cryptosporidiosis Parasitism (Criteria: Parasitologic or histopathologic exam)

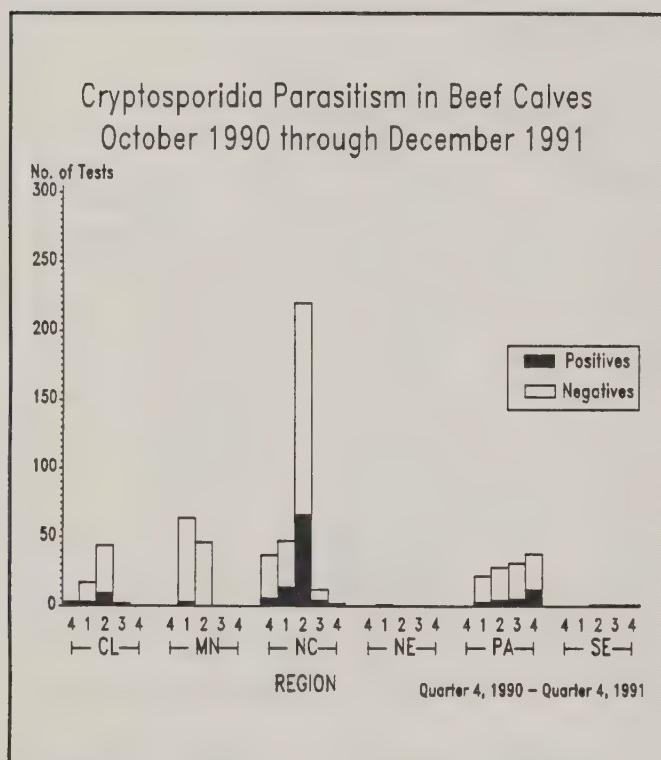


Figure 25

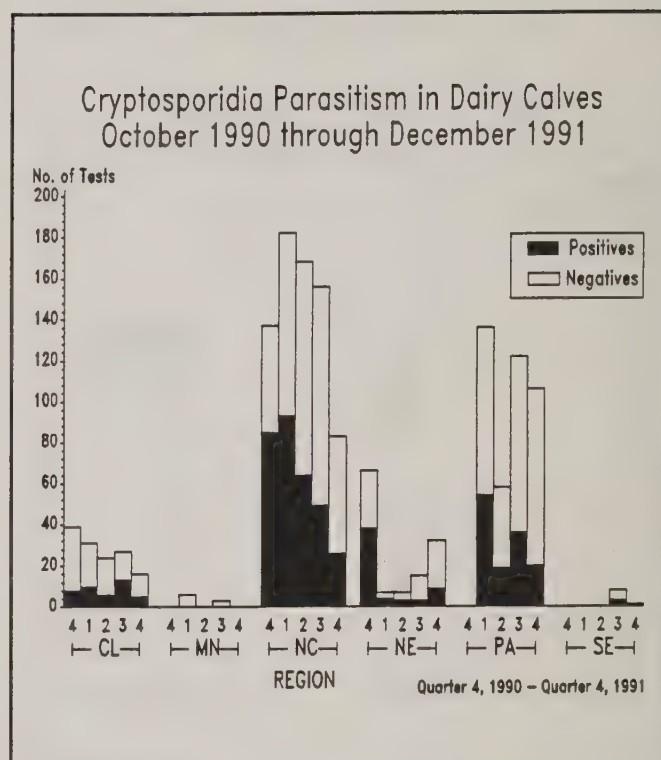


Figure 26

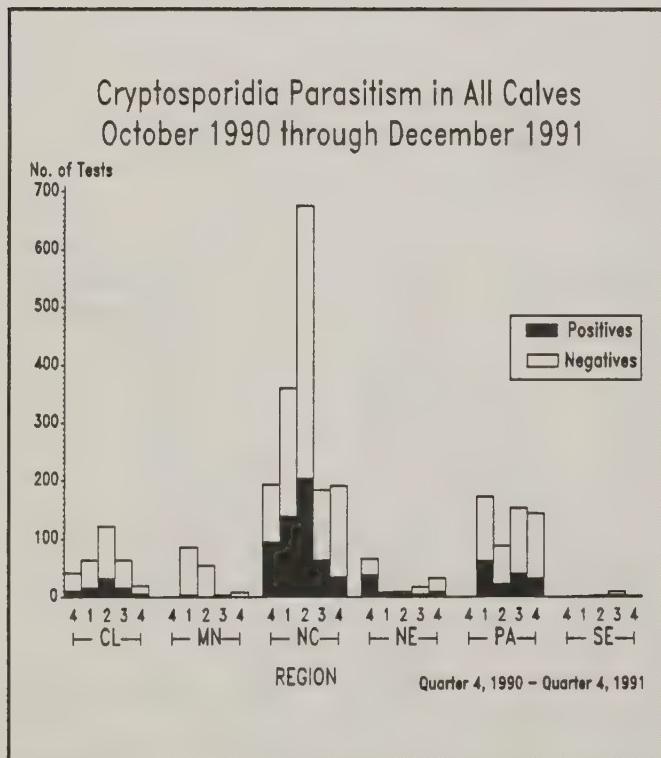


Figure 27

The North-Central and Pacific regions had the most positive tests and the most total tests reported for cryptosporidiosis in calves from October through December, 1991 (35/191 and 32/144, respectively). The percentage of tests positive among dairy calves in the fourth quarter of 1991 was lower than a year earlier in the North-Central and Northeast regions, and higher in the Central region. All three of those regions had fewer positive tests and fewer total tests reported for dairy calves than a year ago.

Bovine Viral Diarrhea (BVD)

(Criteria: Virus isolation, or, positive FA [any tissue] with histologic lesions)

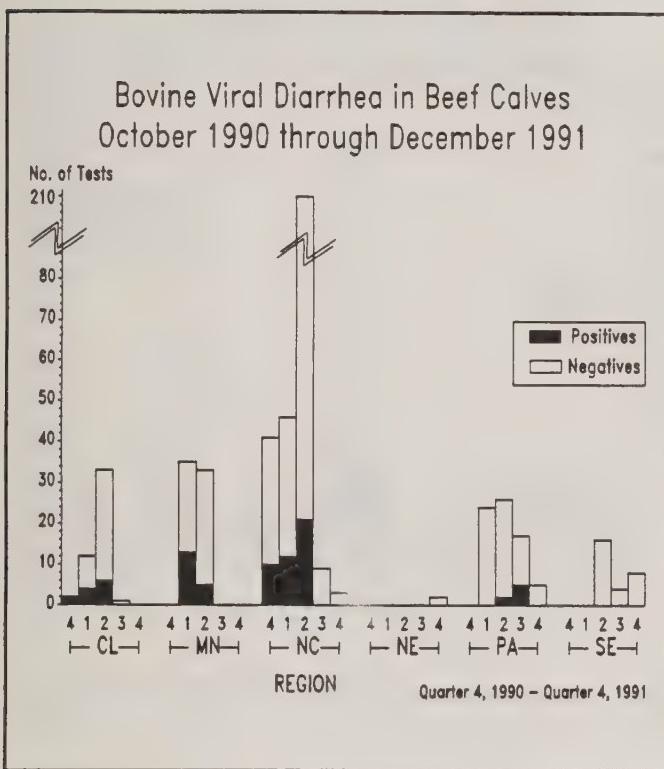


Figure 28

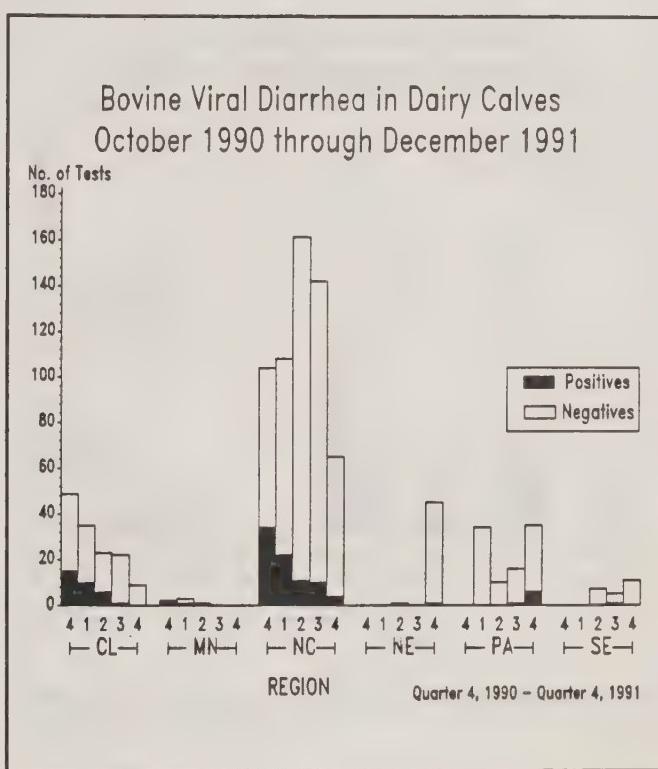


Figure 29

The number of positive tests for bovine viral diarrhea (BVD) decreased from one year ago. For all regions, only 24 positive tests were reported out of 345 total tests performed for BVD in all calves during the fourth quarter of 1991. For the three regions (CL, MN, and NC) which reported tests performed in both the fourth quarter of 1990 and of 1991, a total of 14 positives out of 226 tests were reported for the fourth quarter of 1991 compared to 72 positives out of 227 tests for the fourth quarter of 1990.

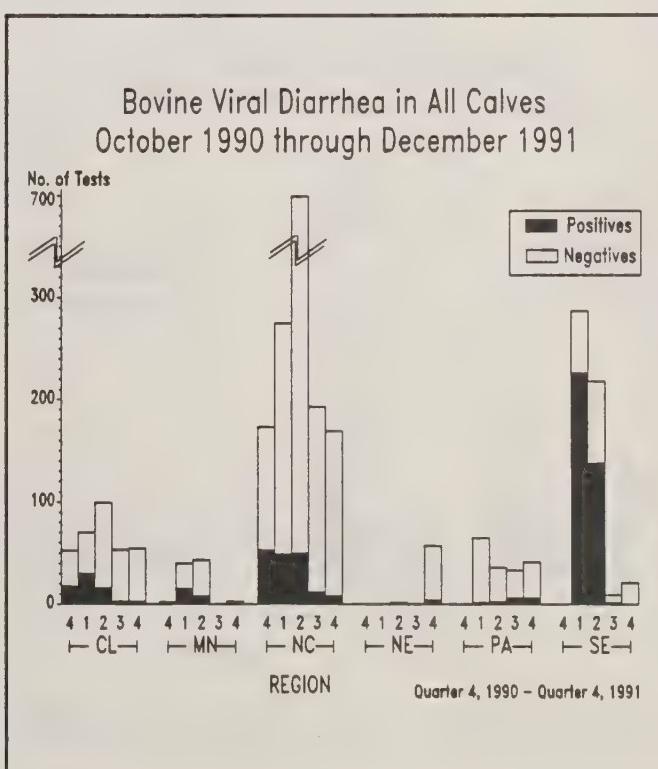


Figure 30

II. Etiologic Agents Associated with Calf Diarrhea (continued)

Coronavirus (Criteria: Antigen by FA or ELISA, or, electron microscopy of feces/intestinal contents)

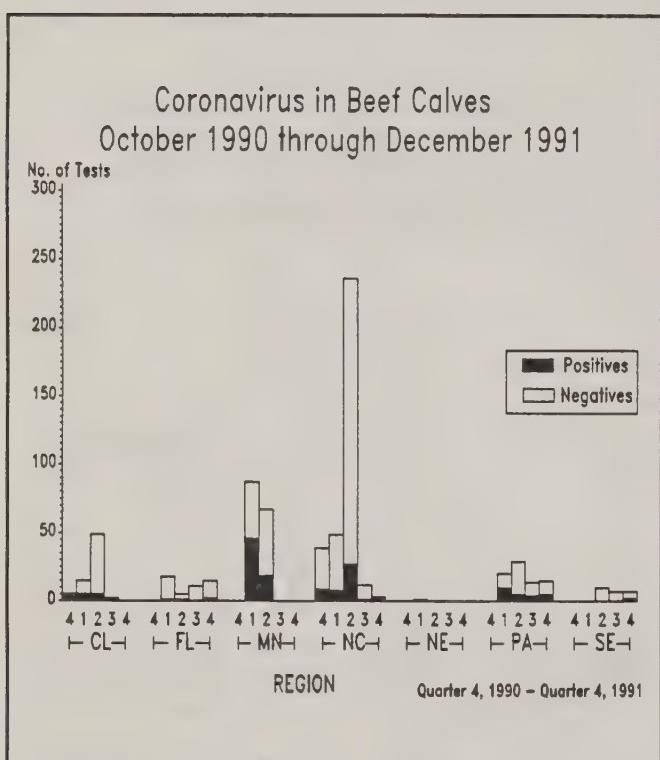


Figure 31

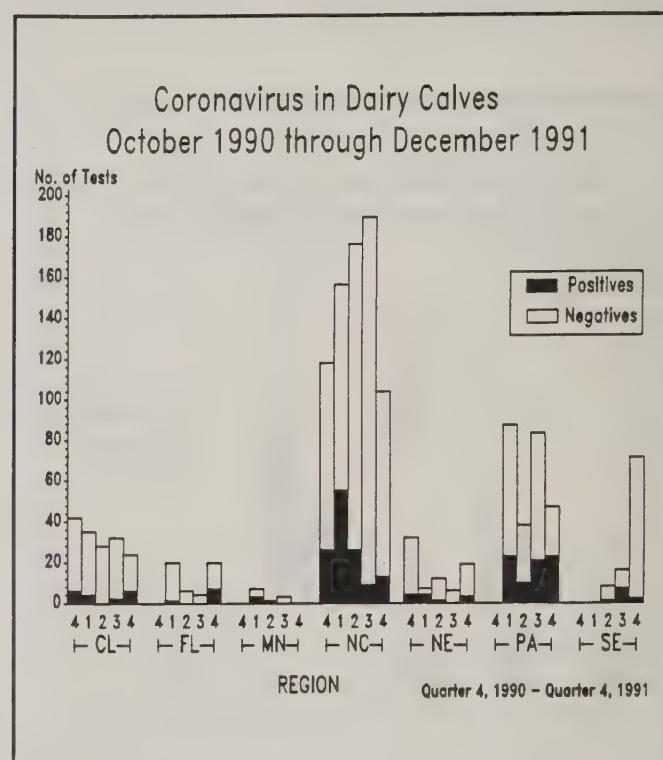


Figure 32

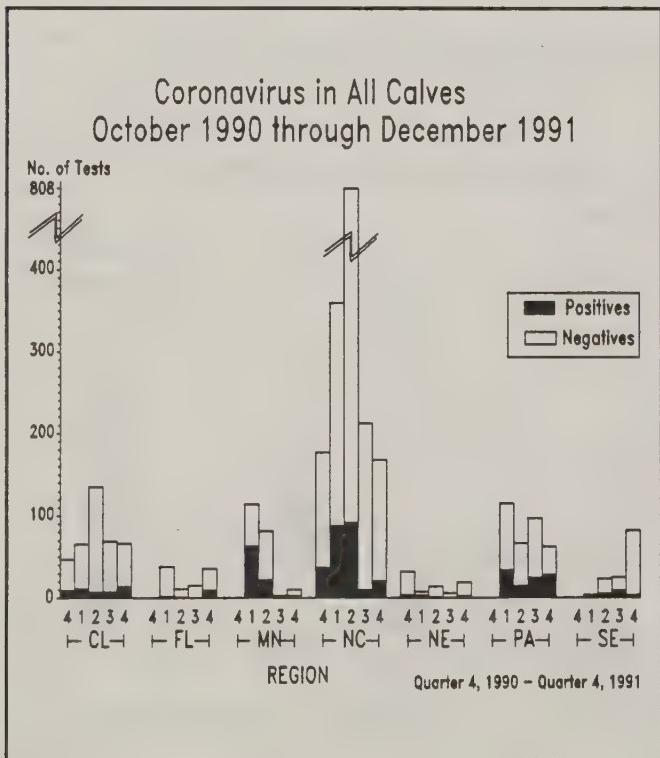


Figure 33

The Pacific and North-Central regions had the most positive tests for coronavirus reported for the fourth quarter of 1991. Most of the positives were from dairy calves. The number of tests reported for calves in the North-Central region continued to exceed the number in any other region, with most of those tests reported for dairy calves.

II. Etiologic Agents Associated with Calf Diarrhea (continued)

Rotavirus (Criteria: Antigen by FA or ELISA, or, electron microscopy of feces/intestinal contents)

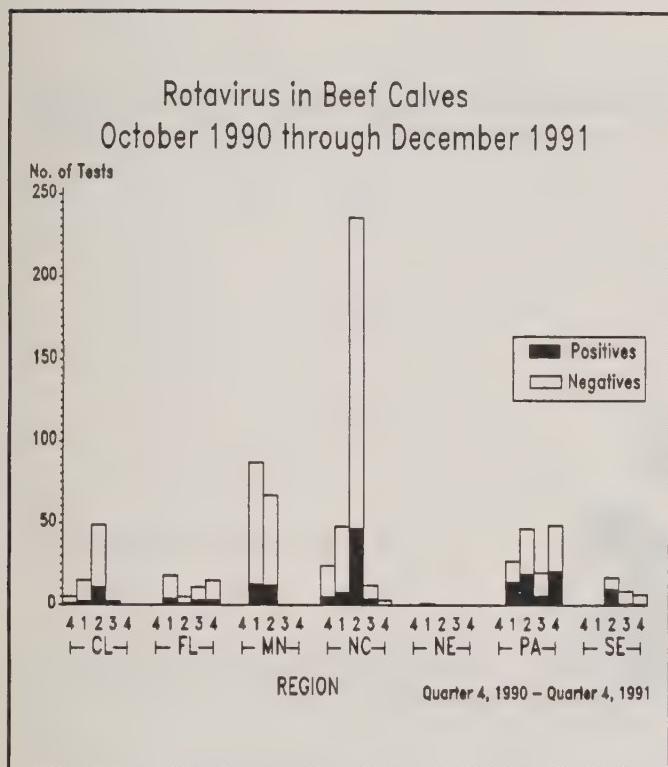


Figure 34

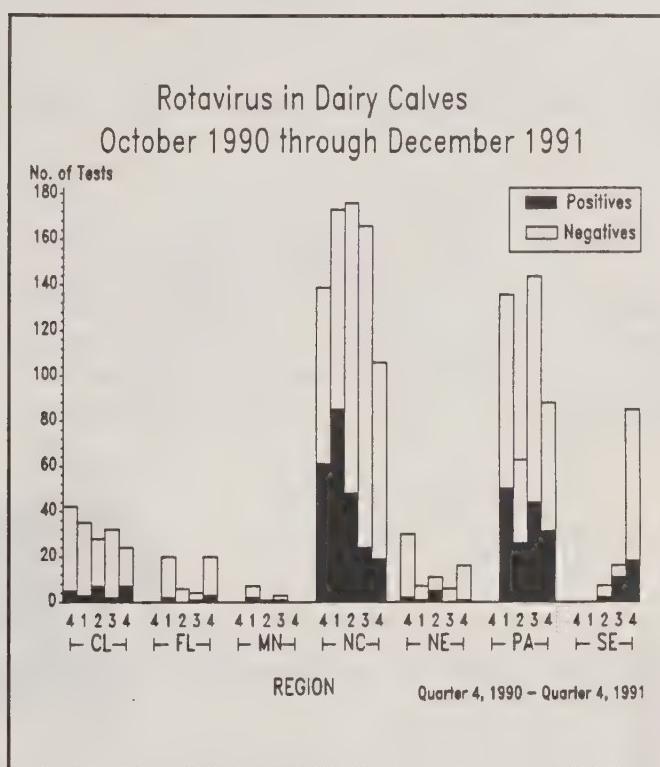


Figure 35

The Pacific region had the most positive tests (59) reported for rotavirus in calves during the fourth quarter of 1991. The number of positive tests reported from the Pacific region, and the total number of tests performed, remained relatively constant over the past four quarters. The majority of the positive tests in that region were reported from dairy calf samples.

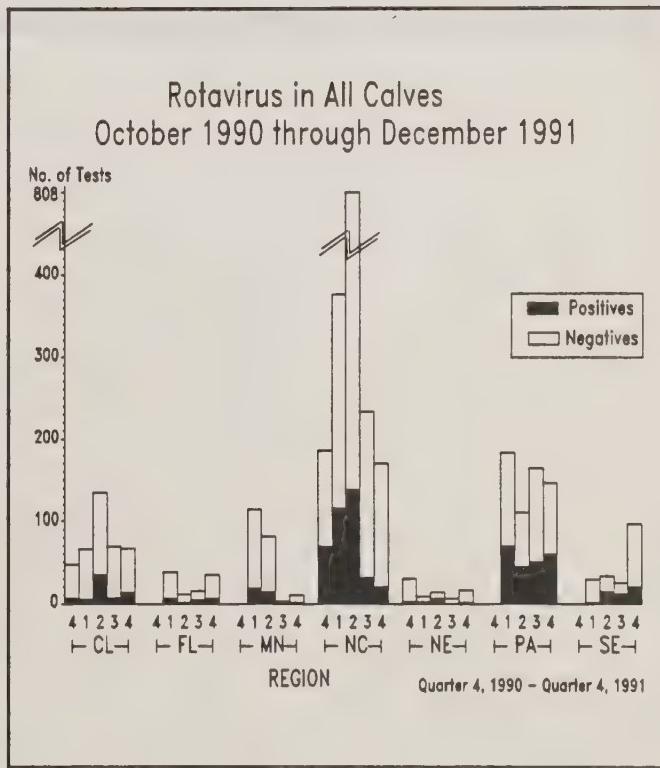


Figure 36

II. Etiologic Agents Associated with Calf Diarrhea (continued)



III. Etiologic Agents Associated with Piglet Diarrhea

Section III characterizes agents most commonly associated with diarrhea in piglets (eight weeks of age or less) from accessions reported to veterinary diagnostic laboratories.

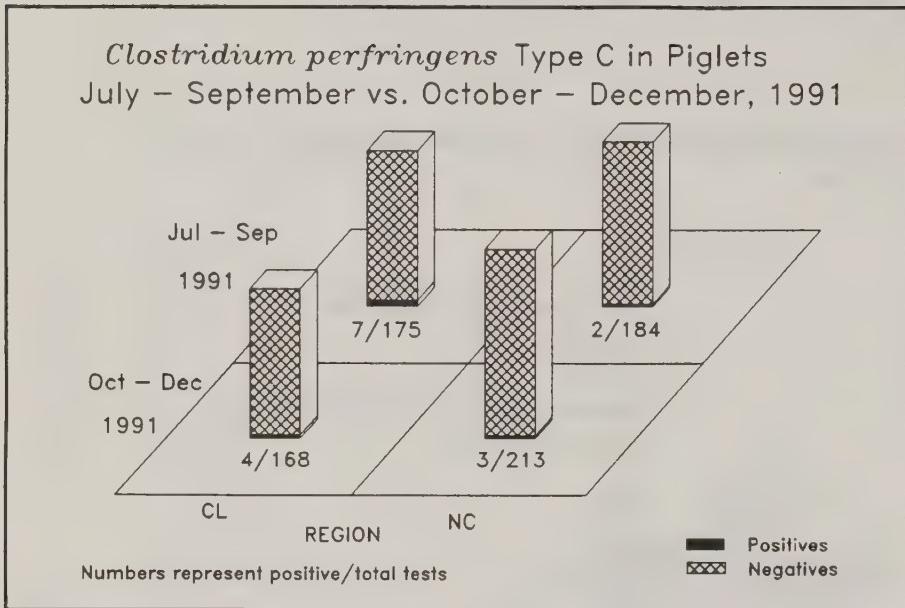
<i>Clostridium perfringens Type C</i>	24
<i>Escherichia coli</i>	24
Rotavirus	25
Transmissible Gastroenteritis (TGE)	25
Coccidia Parasitism	26

Key to Figures in this Section:

- In some cases, the reported number of negative tests performed is a minimum because some laboratories were not able to determine the total number of negative tests performed.
- Data are presented by region of sample origin and quarter year of sample submission.

III. Etiologic Agents Associated with Piglet Diarrhea (continued)

Clostridium perfringens Type C (Criteria: Gross and histopathologic exam)

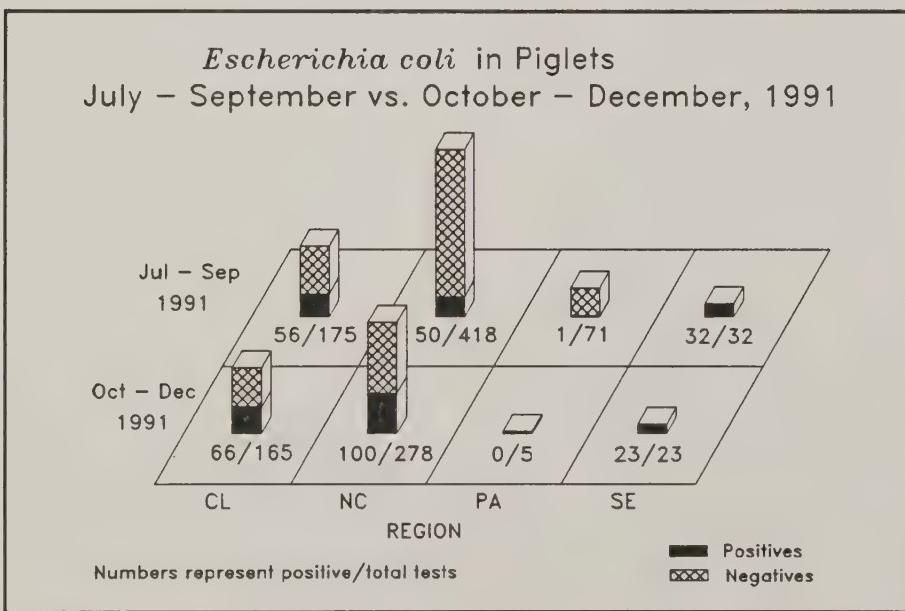


Only two regions reported *Clostridium perfringens* type C from piglets in the fourth quarter of 1991. Neither the Central nor the North-Central region found more than 3 percent of all tests positive for the organism during the quarter.

Figure 37

Escherichia coli

(Criteria: Culture from intestine and demonstration of at least one virulence characteristic such as: adhesive antigens [K99], bacterial adherence, or enterotoxin)



The North-Central region reported twice as many positive tests for *E. coli* for the fourth quarter of 1991 as compared to the previous quarter, despite performing 140 fewer total tests. The number of negative tests performed on piglet samples from the Southeast region could not be determined, so only positive tests are shown.

Figure 38

III. Etiologic Agents Associated with Piglet Diarrhea (continued)

Rotavirus (Criteria: Antigen by FA or ELISA, or, electron microscopy of feces/intestinal contents)

The North-Central region had the most positive tests reported for rotavirus in piglets for the fourth quarter of 1991 (40), as well as the largest increase in the number of positives as compared to the previous quarter (+23).

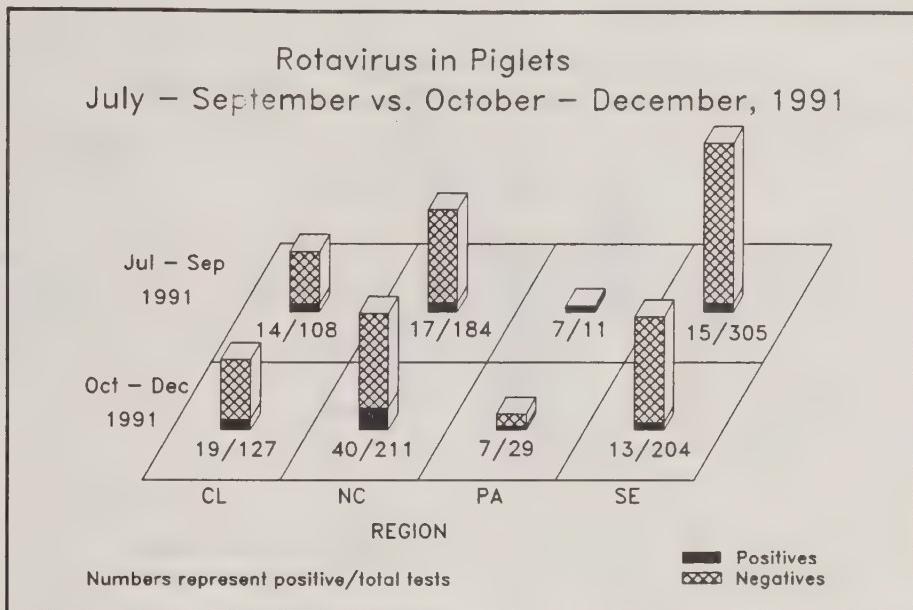


Figure 39

Transmissible Gastroenteritis (TGE) (Criteria: Antigen by FA, or, electron microscopy)

Three of the four regions which had test results for transmissible gastroenteritis reported for both the third and fourth quarters of 1991 had increases in the number of positive tests. The fourth region (Pacific) had five positive tests in each quarter.

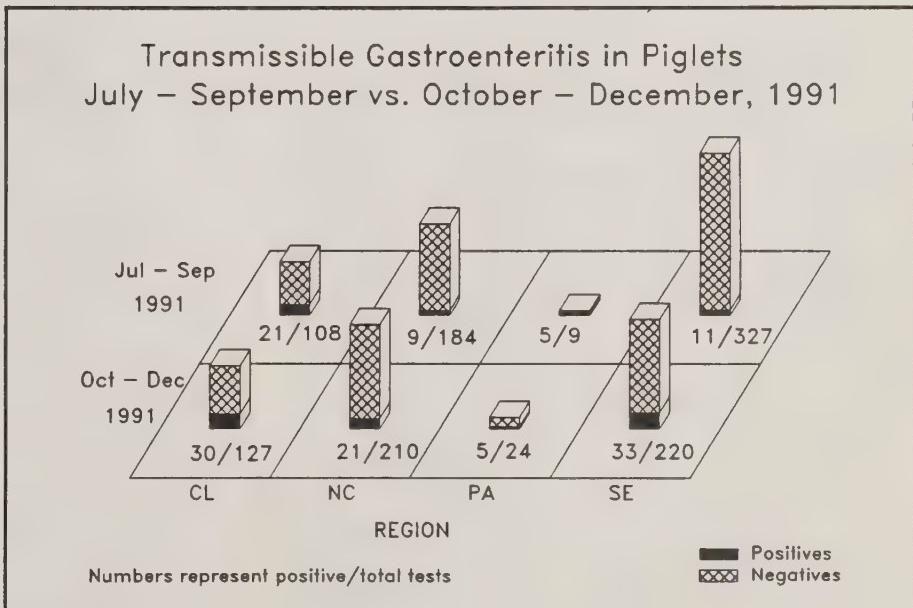
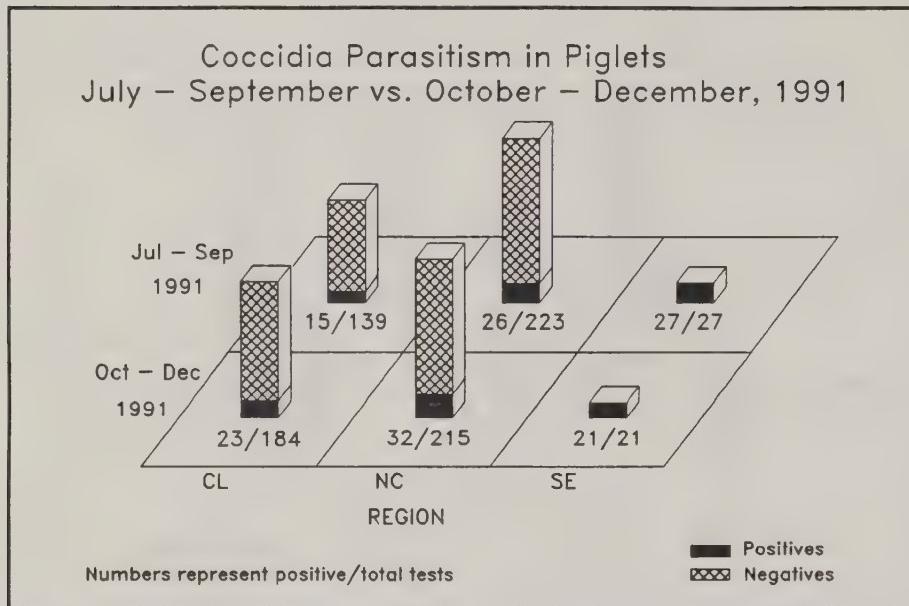


Figure 40

III. Etiologic Agents Associated with Piglet Diarrhea (continued)

Coccidia Parasitism (Criteria: Parasitologic or histopathologic exam)



The number of positive tests reported for coccidia in piglets increased for both the Central and North-Central regions in the fourth quarter of 1991 as compared to the previous quarter. The percentage of total tests which were positive in those two regions increased only slightly. The number of negative tests performed on samples from the Southeast region could not be determined, so only positive tests are shown.

Figure 41

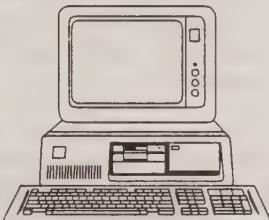
This section contains news items and articles of potential interest to diagnostic laboratories. Submissions from nonparticipating laboratories are welcome.

DxMONITOR Data Submission System Now Available

The DxMONITOR Data Submission System has been developed to assist laboratories participating in the Veterinary Diagnostic Laboratory Reporting System (VDLRS) with transfer of captured data to Fort Collins.

The system has not been designed to capture data directly out of a laboratory's data management system. To use the system, data must first be captured by a laboratory in whatever manner works best for that particular laboratory. The summary totals of these data are then entered into the data entry screen provided with the DxMONITOR Data Submission System. The reference guide leads the user through this process in a step-by-step manner.

Since the system was written within a software package called "Epi Info", a copy of this program and a user's guide are also included. Epi Info was developed by the Centers for Disease Control and the World Health Organization. It has many capabilities including data analysis, word processing, statistics, etc. Epi Info may be copied for friends and colleagues.



The following materials are included with the DxMONITOR Data Submission System:

- Epi Info program diskette
- Epi Info user's guide
- DxMONITOR program diskette
- DxMONITOR reference guide

This is a test version of a simple system and it will need some refinements. Three laboratories have already used the system to successfully submit their data (Georgia [Tifton], Minnesota, and South Dakota). Feel free to contact the staff in Fort Collins for more information about the system (303) 490-7800.

Clip-off "coupon" for copies of the DxMONITOR, brochures, and committee reports.

Materials available from the Veterinary Diagnostic Laboratory Reporting System (VDLRS) are listed below. Complete this coupon and send it to:

USDA:APHIS:VS
Veterinary Diagnostic Laboratory
Reporting System
555 South Howes, Suite 200
Fort Collins, Colorado 80521-2586

(Please allow 3-4 weeks for delivery.)

Quantity _____

DxMONITOR* (*Quarterly report of VDLRS data*)

Introduction to the VDLRS (*An informational brochure*)

Report of the 1991 DxMONITOR Committee Meeting (August 1991)

Report of the 1990 VDLRS Planning Committee Meeting (June 1990)

* The most recent issue of the DxMONITOR will be sent. If you want past issues, please call (303) 490-7800 or FTS: 323-7800.

Name: _____

Company/Business: _____

Street: _____

City, State: _____

Zip: _____ Phone: _____

Please add my name to the DxMONITOR mailing list.

University of Georgia-Tifton Laboratory Seeks Information on EEE in Swine

Faculty at the University of Georgia Veterinary Diagnostic Laboratory in Tifton have applied for funding for a research project on eastern equine encephalomyelitis (EEE) virus infection in swine. Any information on current EEE outbreaks in swine (from any State) would be appreciated. The laboratory will waive diagnostic fees for submission of specimens from swine suspected of having EEE. Please refer any information on such cases to Dr. Francois Elvinger in Tifton, Georgia, at (912) 386-3340.

VDLRS Editorial Board Reviews Content of DxMONITOR

In August of 1991, the Veterinary Diagnostic Laboratory Reporting System (VDLRS) established an Editorial Board to review the content of each issue of the DxMONITOR. The Board is currently made up of three members, Drs. James Case of California (Davis), James Collins of Minnesota, and Francois Elvinger of Georgia (Tifton).

Beginning with the Fall 1991 issue, these individuals have spent many hours of voluntary time helping to improve the quality of the DxMONITOR. Thanks to their efforts, the DxMONITOR should continue to improve as a useful source of veterinary diagnostic information.



1992 AAVLD Membership Application

Anyone interested in joining the American Association of Veterinary Laboratory Diagnosticians (AAVLD) should fill out the application form below and mail it to the address on the application.

1992 Membership Application

American Association of Veterinary Laboratory Diagnosticians, Inc.

P.O. Box 6023, Columbia, MO 65205/Telephone (314) 882-6811

The purpose of the American Association of Veterinary Laboratory Diagnosticians is the dissemination of information relating to the diagnosis of animal disease, the coordination of the diagnostic activities of regulatory, research and service laboratories, the establishment of uniform diagnostic techniques and the establishment of accepted guides for the improvement of diagnostic laboratory organizations relative to facilities, equipment and personnel qualifications.

Any laboratory worker engaged in the field of disease diagnosis in animals or in allied fields involving teaching, research, commercial or regulatory function is eligible for membership and is invited to join.

- Full Member \$40.00: Annual Membership Dues
- Graduate Student/Resident Member \$25.00:
Annual Membership Dues

Please remit in U.S. dollars. Outside the USA, remit by draft on a U.S. bank or by International Postal Money Order.

Dues include a subscription to the *AAVLD Newsletter*, a current AAVLD membership roster, and the *Journal of Veterinary Diagnostic Investigation*.

Please return this application with your check or money order.

Name _____ Degree _____

Institution/Lab _____

Address _____

City _____ State _____

Zip _____ Country _____

Office phone _____ Fax No. _____

Interest/specialty area _____

Appendix

This section provides tables displaying the most current data reported for the following diagnoses or agents:

Bovine Leukosis	30
Equine Viral Arteritis (EVA)	30
Paratuberculosis	31
<i>Campylobacter</i> spp.	32
<i>Clostridium perfringens</i> Type C	33
<i>Escherichia coli</i>	34
<i>Salmonella</i> spp.	35
Coccidia Parasitism	36
<i>Cryptosporidium</i> Parasitism	37
Bovine Viral Diarrhea (BVD)	38
Coronavirus	39
Rotavirus	40
<i>Clostridium perfringens</i> Type C	41
<i>Escherichia coli</i>	41
Coccidia Parasitism	41
Rotavirus	42
Transmissible Gastroenteritis (TGE)	42

Key to Tables in this Section:

- Values shown are for Quarter 4 (October 1991 through December 1991), except for the YTD totals.
Paratuberculosis is reported for Quarter 3 (July 1991 through September 1991).
Bovine leukosis is reported for Quarters 3 and 4 (July 1991 through December 1991).
- Data are presented by region of sample origin and month of sample submission.
- Values represent the number of positive tests (P) and the number of tests performed (T).
- Values reported in the "ALL" category represent all tests performed during the 3-month period. They include some tests for which a month of submission was not known. Therefore, the sum of the monthly values may not be equal to the "ALL" values.
- In some cases, the reported total number of tests performed is a minimum because some laboratories were not able to determine the total number of negative tests performed.
- TOT = Total
- UNK = Unknown
- YTD = Year-To-Date

Bovine Leukosis

Region

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul P	17			55		20	102	28			38			260
T	149			121		143	546	160			101			1220
Aug P	10			133		82	211	41	1	15	51			544
T	119			238		359	1135	134	2	54	126			2167
Sep P	3			36	0	51	150	31		0	38			309
T	93			267	2	416	639	94		3	85			1599
Oct P	20			10	7	58	308	0			89		132	624
T	167			60	15	351	2057	2			224		375	3251
Nov P	19	0		31		24	534	1			30		0	639
T	151	20		163		115	2478	2			81		127	3137
Dec P	20			49		37	194		1		25		4	330
T	169			200		309	1517		1		72		57	2325
All P	743	174		500	7	272	1499	101	2	15	271	759	136	4479
T	2779	675		1424	17	1693	8372	392	3	57	689	3139	559	19799
YTD P	839	412		501	34	449	2535	316	2	15	609	1089	164	6965
T	3304	1698		1432	87	2966	15484	1232	3	57	1407	4462	630	32762

Equine Viral Arteritis

Region

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	AK	TOT
Oct P	0			40	0	0	17	2			0	0	0	59
T	3			847	105	1	158	184			26	1	47	1372
Nov P	0			37	0	0	34	15			3	0		89
T	32			981	4	1	199	374			34	12		1637
Dec P	2	0		26			19	9			2	0		58
T	33	1		409			116	486			23	2		1070
All P	2	4		103	0	0	70	26			5	0	0	210
T	68	448		2237	109	2	473	1044			83	15	47	4526
YTD P	6	11		242	0	3	112	59	0		15	1	0	449
T	96	957		8752	115	15	1027	1853	2		181	57	47	13102

Paratuberculosis

Bovine		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul P	3				3	0	9	12	1			3		31	
T	18				23	1	15	30	33			7		127	
Aug P	2				2		13	12	4			1		34	
T	6				12		13	33	110			5		179	
Sep P	10				5	0	6	111	4			4		140	
T	80				28	18	15	791	13			7		952	
All P	100	7			27	0	28	135	9			8		314	
T	816	33			189	19	43	854	156			19		2129	
YTD P	123	64	1		82	1	106	251	27			17	11	6	689
T	1038	191	123		431	24	375	2004	316			41	101	48	4692

Ovine		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul P								0						0	
T								5						5	
Aug P								0	0					0	
T								1	1					2	
Sep P								1						1	
T								2						2	
All P	0							1	0					1	
T	5							8	1					14	
YTD P	3							4	1	0				8	
T	9							12	20	1				42	

Caprine		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul P								0						0	
T								3						3	
Aug P															
T															
Sep P								0	0					0	
T								2	28					30	
All P	2							0	0					2	
T	7							5	28					40	
YTD P	2							1						8	
T	7							1	3	39	28			78	

Campylobacter spp.

Beef Calves

Region

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P														
T														
Nov P							0						0	
T							1						1	
Dec P							0						0	
T							6						6	
All P							0	0					0	
T							2	7					9	
YTD P				14			0	0					14	
T				64			3	14					81	

Dairy Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P														
T														
Nov P							0						0	
T							1						1	
Dec P							0						0	
T							5						5	
All P							2	0					2	
T							92	6					98	
YTD P				0			4	0					4	
T				1			156	12					169	

All Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P														
T														
Nov P							0						0	
T							3						3	
Dec P							0						0	
T							11						11	
All P				1			2	0					3	
T				10			98	14					122	
YTD P				16			4	0					20	
T				85			173	27					285	

Clostridium perfringens Type C**Beef Calves****Region**

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P														
T														
Nov P														
T														
Dec P														
T														
All P														
T														
YTD P								9	0				9	
T								64	4				68	

Dairy Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P														
T														
Nov P							4						4	
T							5						5	
Dec P							1						1	
T							3						3	
All P							5						5	
T							8						8	
YTD P	0						0	6					6	
T	8						1	107					116	

All Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	0													0
T	13													13
Nov P	0						4							4
T	13						5							18
Dec P	0						1							1
T	13						3							16
All P	0						0	5						5
T	39						2	54						95
YTD P	0						11	6						17
T	77						77	160						314

Escherichia coli

Beef Calves

Region

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P								12		1			13	
T								31		1			32	
Nov P								1					1	
T								10					10	
Dec P						1		0					1	
T						1		16					17	
All P							1	1	13		1		16	
T							1	2	57		1		61	
YTD P	4					15	24	4	17		3		67	
T	22					149	183	6	147		3		510	

Dairy Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P						2		29			0		31	
T						6		66			1		73	
Nov P	1					5		10					16	
T	6					19		32					57	
Dec P	2					10		7					19	
T	5					17		35					57	
All P	3	3				17	51	46			0		120	
T	11	14				42	92	133			1		293	
YTD P	9	3				3	123	205	107		1	0	451	
T	50	14				11	537	293	426		1	4	1336	

All Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	3					2		41		1	0		47	
T	16					6		97		1	1		121	
Nov P	3					5		11					19	
T	19					19		42					80	
Dec P	7		6			11		7					31	
T	23		6			22		51					102	
All P	13	3		6	0	22	54	59		1	0		158	
T	58	14		6	10	139	98	190		1	1		517	
YTD P	27	3		8	19	267	234	126		4	0	30	718	
T	184	14		8	199	1303	328	583		5	4	95	2723	

Salmonella spp.

Beef Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct	P						0		0			0		0	
	T						1		24			1		26	
Nov	P						5					1		6	
	T							16				1		17	
Dec	P						0		6					6	
	T						2		24					26	
All	P						0	0	11			1		12	
	T						3	2	64			2		71	
YTD	P	8					3	9	0	40		5		65	
	T	70					155	319	6	218		6		774	

Dairy Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct	P	3					6		18			1		28	
	T	7					19		87			1		114	
Nov	P	0					5		12			4		21	
	T	9					49		46			4		108	
Dec	P	2					8		4			1		15	
	T	10					44		34			1		89	
All	P	5	8				19	7	34			6		79	
	T	26	14				112	92	167			6		417	
YTD	P	18	8	2			1	142	10	88		17	0	286	
	T	123	14	6			11	694	292	678		18	4	1840	

All Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct	P	5					6		18			1		30	
	T	27					26		112			2		167	
Nov	P	1					6		17			6		30	
	T	23					54		63			6		146	
Dec	P	3			0		9		10			1		23	
	T	30			10		53		58			1		152	
All	P	9	8		0	0	25	7	45			8		102	
	T	80	14		10	10	225	98	233			9		679	
YTD	P	37	8	2	0	5	186	10	132			23	0	408	
	T	364	14	6	12	208	1742	328	930			26	4	3714	

Appendix (continued)

Coccidia Parasitism

Beef Calves

	Region													
	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P						1		0			1			2
T						1		24			1			26
Nov P								0						0
T								8						8
Dec P						1		0						1
T						1		6						7
All P							2	0			1			3
T							2	38			1			41
YTD P	1					4	19	3			2			29
T	20					96	128	119			2			365

Dairy Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	0						0	1						1
T	4						6	55						65
Nov P	0						0	0			2			2
T	1						17	22			2			42
Dec P	0						0	0						0
T	1						11	29						41
All P	0	0					0	2	1		2			5
T	6	14					34	31	106		2			193
YTD P	3	0				0	19	17	2		6	0		47
T	42	14				8	351	61	365		6	1		848

All Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	5					4		1			1			11
T	34					10		79			1			124
Nov P	0					0		0			2			2
T	29					19		30			2			80
Dec P	1			2		1		0						4
T	28			8		13		35						84
All P	6	0		2	0	5	2	1			3			19
T	91	14		8	7	88	31	144			3			386
YTD P	12	0		4	5	51	17	5			8	0	1	103
T	201	14		10	130	876	66	495			14	1	78	1885

Cryptosporidiosis Parasitism

Appendix (continued)

Beef Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P							1		6			0		7	
T							1		24			1		26	
Nov P									3					3	
T									8					8	
Dec P							1		3					4	
T							1		6					7	
All P							2		12			0		14	
T							2		38			1		41	
YTD P	13	2				3	86	0	24			1		129	
T	63	2				110	281	1	119			3		579	

Dairy Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	2						5		13			1	1	22	
T	4						12		55			1	1	73	
Nov P	2						9		2					13	
T	6						40		22					68	
Dec P	1						12		5					18	
T	6						31		29					66	
All P	5	3					26	9	20			1	1	65	
T	16	14					83	32	106			1	1	253	
YTD P	34	4				0	232	19	129			4	2	424	
T	98	16				9	589	61	422			9	4	1208	

All Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	2						7		19			1	1	30	
T	5						17		79			2	1	104	
Nov P	2					0	10		5					17	
T	7					1	44		30					82	
Dec P	2				4		14		8					28	
T	7				7		38		35					87	
All P	6	3			4	0	35	9	32			1	1	91	
T	19	14			7	8	191	32	144			2	1	418	
YTD P	70	6			4	3	442	22	158			5	2	717	
T	269	18			9	150	1412	66	558			14	4	2582	

Appendix (continued)

Bovine Viral Diarrhea

Beef Calves

		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P							0		0			0			0
T							2		3			4			9
Nov P							0		0			0			0
T							1		2			2			5
Dec P												0			0
T												2			2
All P							0		0			0			0
T							2		3			8			20
YTD P	10						0	18	33	0	7		0		68
T	46						2	68	268	2	72		28		486

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	0						1		2			0			3
T	4						14		24			3			45
Nov P	0						3		3			0			6
T	2						26		5			8			41
Dec P	0						0		1						1
T	3						25		6						34
All P	0						0	4	1	6		0			11
T	9						2	65	45	35		11			167
YTD P	17						0	1	47	1	7		1	0	77
T	89						2	4	476	46	95		23	2	743

All calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	1						2		2			0			5
T	21						22		27			9			79
Nov P	1						3		3			0			7
T	12						28		8			10			58
Dec P	1				1		0		1			0			3
T	21				5		27		6			2			61
All P	3				1	3	8	4	6			0			25
T	54				9	3	169	57	41			21			354
YTD P	52				1	26	119	4	15			365	0	3	588
T	276				9	86	1336	58	175			535	2	56	2539

Coronavirus

Appendix (continued)

Beef Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P							1		4			2		7	
T							1		8			7		16	
Nov P								1						1	
T									4					4	
Dec P							0		0					0	
T							2		3					5	
All P		2					1		5			2		10	
T		15					3		15			7		40	
YTD P	10	4				65	37	0	24			2		142	
T	66	49				154	300	1	78			24		672	

Dairy Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	0						0		9			1	1	11	
T	4						16		23			41	1	85	
Nov P	4						9		5			1		19	
T	9						48		13			27		97	
Dec P	2						4		9			0		15	
T	11						40		11			3		65	
All P	6	7					13	3	23			2	1	55	
T	24	20					104	19	47			71	1	286	
YTD P	12	8				3	103	8	77			10	2	223	
T	119	50				11	625	44	255			95	5	1204	

All Calves		Region													
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	5						1		13			3	1	23	
T	18						21		31			52	1	123	
Nov P	5						10		6			1		22	
T	20						52		17			27		116	
Dec P	4			0			6		9			0		19	
T	29			4			49		14			3		99	
All P	14	9		0	3	21	3	28			4	1		83	
T	67	35		4	10	168	19	62			82	1		448	
YTD P	42	12		0	88	211	8	102			22	2	35	522	
T	337	99		4	208	1548	47	341			134	5	71	2794	

Appendix (continued)

Rotavirus

Beef Calves

Region

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P						0		4			1			5
T						1		21			7			29
Nov P							5							5
T							9							9
Dec P						0		12						12
T						2		19						21
All P		3				0		21			1			25
T		15				3		49			7			74
YTD P	14	11				25	59	1	60		12			182
T	66	49				154	299	1	143		33			745

Dairy Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	1					4		17			7	1		30
T	4					16		44		44	1			109
Nov P	2					10		3			10			25
T	9					48		24			38			119
Dec P	4					5		11			1			21
T	11					42		20			3			76
All P	7	3				19	1	31			18	1		80
T	24	20				106	16	88			85	1		340
YTD P	19	6		0	3	176	7	151			31	2		395
T	119	50		1	11	621	40	431			108	5		1386

All Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	5					4		28			9	1		47
T	18					21		73		55	1			168
Nov P	4					10		8			10			32
T	20					52		34			38			144
Dec P	4			1		6		23			1			35
T	29			8		51		39			3			130
All P	13	6		1	1	20	1	59			20	1		122
T	67	35		8	10	170	16	146			96	1		549
YTD P	60	17		1	34	305	9	223			47	2	25	723
T	337	99		9	208	1587	43	603			183	5	68	3142

Etiologic Agents Associated with Piglet Diarrhea

Appendix (continued)

Clostridium perfringens Type C

						Region								TOT
	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	
Oct P	2					0								2
T	64					69								133
Nov P	1					2								3
T	52					52								104
Dec P	1					1								2
T	52					64								116
All P	4					3								7
T	168					213								381
YTD P	11					7								18
T	358					533								891

Escherichia coli

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	27					40		0			7			74
T	64					72		2			7			145
Nov P	19					27		0			6			52
T	49					110		3			6			168
Dec P	20			14		33					10			77
T	52			14		96					10			172
All P	66			14		100		0			23			203
T	165			14		278		5			23			485
YTD P	127			14		194		1			55			391
T	355			14		832		76			55			1332

Coccidia Parasitism

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Oct P	11					13		0			11			35
T	63					69		24			11			167
Nov P	7					11		2			8			28
T	57					52		14			8			131
Dec P	5			1		8		0			2			16
T	64			7		66		9			2			148
All P	23			1		32		2			21			79
T	184			7		215		47			21			474
YTD P	40			1		73		2			48			164
T	338			7		574		47			48			1014

Appendix (continued)

Etiologic Agents Associated with Piglet Diarrhea

		Region															
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT		
Oct P	8						18		3			3			32		
T	47						69		15			70			201		
Nov P	7						11		2			9			29		
T	37						49		12			81			179		
Dec P	4				3		11		2			1			21		
T	43				16		65		2			53			179		
All P	19				3		40		7			13			82		
T	127				16		211		29			204			587		
YTD P	36				3		88		14			28			169		
T	250				16		531		40			509			1346		
<hr/>																	
Transmissible Gastroenteritis																	
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT		
Oct P	6						4		2			0			12		
T	47						69		12			73			201		
Nov P	10						5		3			23			41		
T	37						49		10			81			177		
Dec P	14				0		12		0			10			36		
T	43				10		64		2			66			185		
All P	30				0		21		5			33			89		
T	127				10		210		24			220			591		
YTD P	52				0		41		10			44			147		
T	250				10		530		33			547			1370		

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